

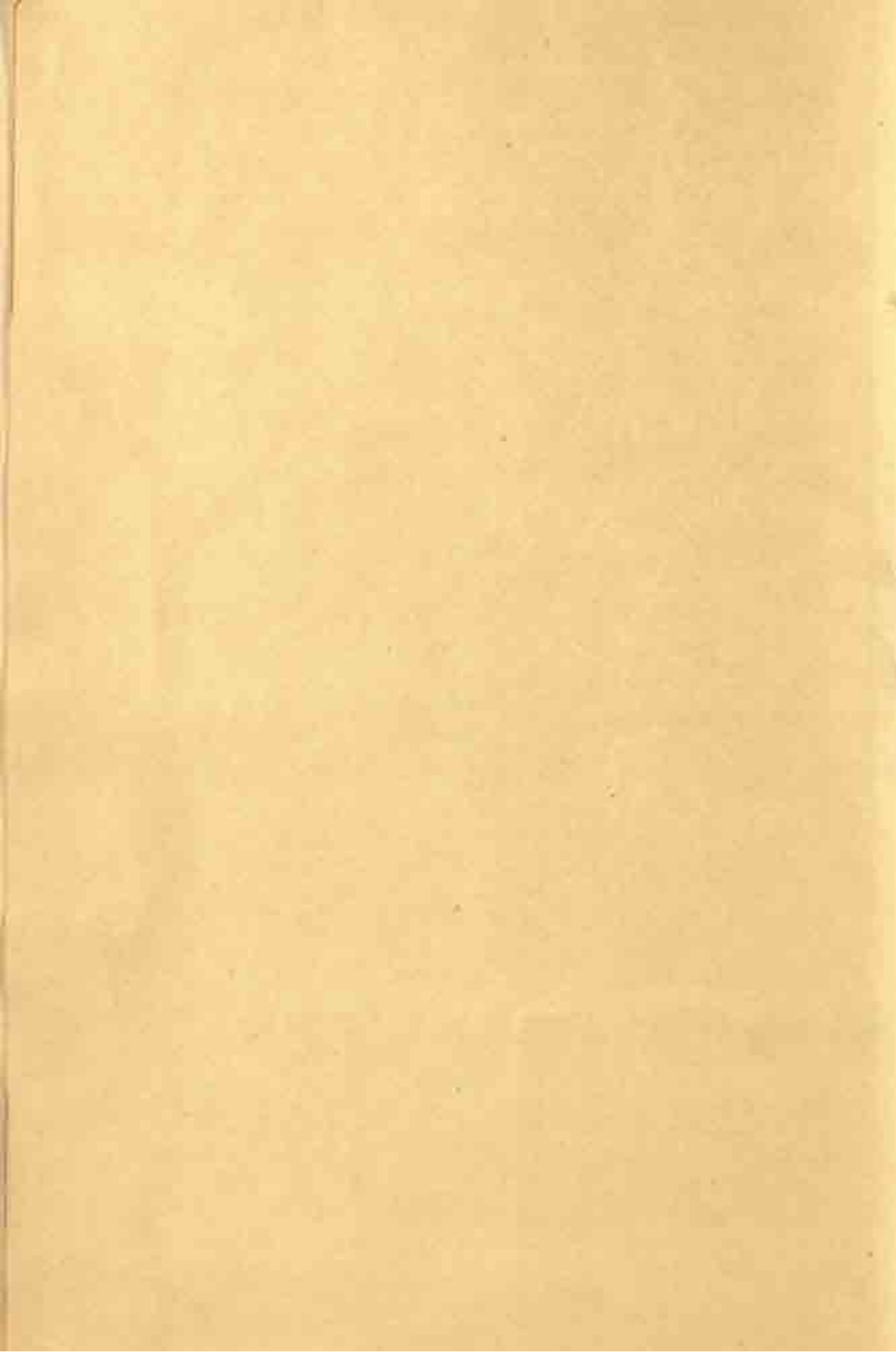
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EDITORIAL

THE persisting obscurity which relates to the extent, nature and chronological sequence of the cultures before and after Alexander's invasion in the lower Panjab has troubled the minds of the archaeologists for a century at least. Lack of comparative material and ceramic types from the area itself has hindered the assignment of any approximate date to the sites, of varying dimensions, which exist in great profusion in that part of the old Panjab which is now in West Pakistan.

In order to uncover the cultural treasures hidden in these ancient mounds and to work out a chronological sequence, limited excavations have been carried out by the Department of Archaeology, Government of Pakistan, at Tulamba in Multan District. These excavations have yielded encouraging results which may help in the identification of the site with one of the cities of Mallois, conquered in 326 B.C. by Peithon, one of Alexander's Generals. For the first time, a cultural sequence of nearly 2,000 years, which has been established by the excavations at the site, will contribute to further archaeological investigations and research. The excavations also revealed a high citadel surrounded by a burnt-brick fortification but no evidence of earthen ramparts, as claimed by Cunningham a century ago, has been found. The mound contains entirely occupational earth and a detailed account of the excavations, carried out by Mr. M. R. Mughal, appears in this issue.

An article on a Zoroastrian Temple at Taxila, contributed by Dr. Nazim-ud-Din Ahmad, contains fresh material regarding the purpose of the building, its comparative features *vis-a-vis* other similar temples and its chronology. Although the author has not been able to ascertain a firm date for the foundation of the temple, his analysis of the problem has shown the impracticability of the chronology suggested by Sir John Marshall.

The issue also includes an account of systematic exploration undertaken in West Pakistan during the year 1965-66.

F. A. Khan

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EXPLORATION IN WEST PAKISTAN

The exploration carried out around Tulamba Bhir, especially along the western bank of the Ravi, helped to locate 16 new sites of the historical period. Another known site was re-examined.

The survey also revealed a site of characteristic Kot Dijian culture at Jalilpur. In addition, the re-examination of a Harappa site at Vainiwal yielded Kot Diji pottery. In view of the succession of closely situated sites mapped within a limited area traversed in 1963, it is hoped that further explorations will reveal a greatly increased number of sites—both historical and Chalcolithic.

The short account of each site of the historical period is followed by a detailed description of two Chalcolithic sites:

1. JARAHI (72° 19' E and 30° 30' N)

Situated on the bank of Tulamba Minor distributory, and 500 yards south-west of the village Jarahi, the mound measures 775 feet from north to south and 590 feet from east to west with a maximum height of 7 feet above the surrounding level. The top of the mound has recently been levelled down. A well, with a diameter of 9 feet, is extant in the south-western part. Pottery recovered from the surface was comparable with that of periods II and III of Tulamba Bhir. A copper coin of Apollodotus, a terracotta mould of Buddha, an ink-pot, a dabber and a net-sinker, were also collected.

2. PINDI (72° 11' E and 30° 33' N)

It is situated on the road to Abdul Hakim near the small village called Pindi. It consists of two small mounds showing a maximum height of 10 feet and covering an area of 750 × 325 feet. Remains of fallen mud and burnt-bricks were observed on the surface. The pottery is comparable with that of period III at Tulamba.

3. BHUSI PINDI-A (72° 10' E and 30° 33' N)

A 10 feet high mound covering an area of 630 × 431 feet is conspicuous by its whitish surface. The pottery types compare well with those of periods III and IV of Tulamba.

4. BHUSI PINDI-B (72° 9' E and 30° 32' N)

A low flat mound covers an area of 400 × 350 feet with a maximum height of 6½ feet. The pottery specimens from the surface were few in number and on them sun and other circular designs were stamped.

5. KHURSHIDABAD (72° 4' E and 30° 34' N)

A group of small mounds where surfaces are littered with pottery, covers an area of 500 × 550 feet. The highest mound measures 10 feet. Stamped pottery comparable with the late levels of period III of Tulamba and undecorated plain ware were collected.

6. BAGAR¹ (72° 1' E and 30° 35' N)

The site spreads over an area of 300 yards from north to south and 315 yards from east to west and has a maximum height of 14 feet above the surrounding level. The surface of the mound is fissured by rains, particularly on the slopes where an abundance of potsherds, badly affected by saltpetre, is concentrated. Remains of mud-bricks are visible along the edge of the mound where, as the contours indicate, a fortification wall is suspected.

Two trenches, in east-west direction, one at the highest point, designated as 'A' and the second on the slope as 'B' were laid, each measuring 19 × 14 feet to obtain the stratigraphic sequence of the site.

In trench 'A', 20 layers were revealed up to the natural soil which is 33 feet from the surface in which layers (2), (3A), (6A) and (7B) marked definite floor levels. The floor (6A) and the layers (6) and (5) were associated with a mud-brick structure running from east to west. It extended towards Trench 'B', where it was found to be associated with the corresponding levels (4A), (4) and (3). In Trench 'B', 11 layers were encountered upto 22 feet depth in which two definite floors were marked (4A) and (2A).

Layer (11) of Trench 'A' corresponded with (6) of 'B' below, in which the deposits were identical in composition, containing loose earth separated

¹ Two years after the present writer's visit, test diggings at Bagar were carried out by Mr. Muhammad Sharif, Field Officer in the Department of Archaeology and Museums.

by horizontal sand and silt streaks mixed with a few charcoal pieces and potsherds. The settlement appeared to have been flooded frequently in the past.

The pottery from Bagar is wheel-made, well-fired to red colour and consists of bowls, lids, oil lamps, beakers, cooking vessels and many specimens of stamped pottery called "Tulamba Stamped Ware". Since no appreciable change in the ceramic types was discernible from the early to the last levels of Bagar, the occupation appeared to have been continuous on the site. A few grey ware pieces were also present.

The painted designs on pottery are executed in black and show geometric and floral motifs, arched designs, wavy lines and cross-hatching.

The designs of "Tulamba Stamped Ware" include elongated eyes, stars, circles, squares and rectangles with dots and rays.

The pottery types fairly compare with those recovered from layers (46) to (17) of periods II to IV at Tulamba Bhir.

The small finds consist of a glass fragment and many pieces of bangles; iron nails; hook and knife blades; shell bangles, both plain and decorated; grinding stones; terracotta beads; a toy grinding mill and cart-wheel; a flesh rubber; a pottery stamp; sling balls; human and animal figurines and many semi-precious beads, including a necklace of 11 beads of cornelian.

7. KALKANWALA BHIR (72° 2' E and 30° 30' N)

A remarkably well-preserved site, with signs of fortification, stands 40 feet above the surrounding level and measures 450 feet from north to south and 950 feet from east to west. Burnt-brick-bats are also scattered on the surface. "Tulamba Stamped Ware", painted pottery and other types recall a parallel with that of periods III to V of Tulamba.

8. RATTI TEHRI BHIR (72° 0' E and 30° 29' N)

The mound is almost flat and measures not more than 10 feet high. It covers 800 × 750 feet area, a part of which on the west and south-west is occupied by Muslim graves and modern houses. Two wells, each measuring 5 feet and 7 feet in diameter and lined with wedge-shaped bricks, are still extant. Pottery collected from the surface compares with that of periods I to III of Tulamba. A circular copper coin of Apollodotus II was picked up from the surface (Pl. XXXIII, No. 2).

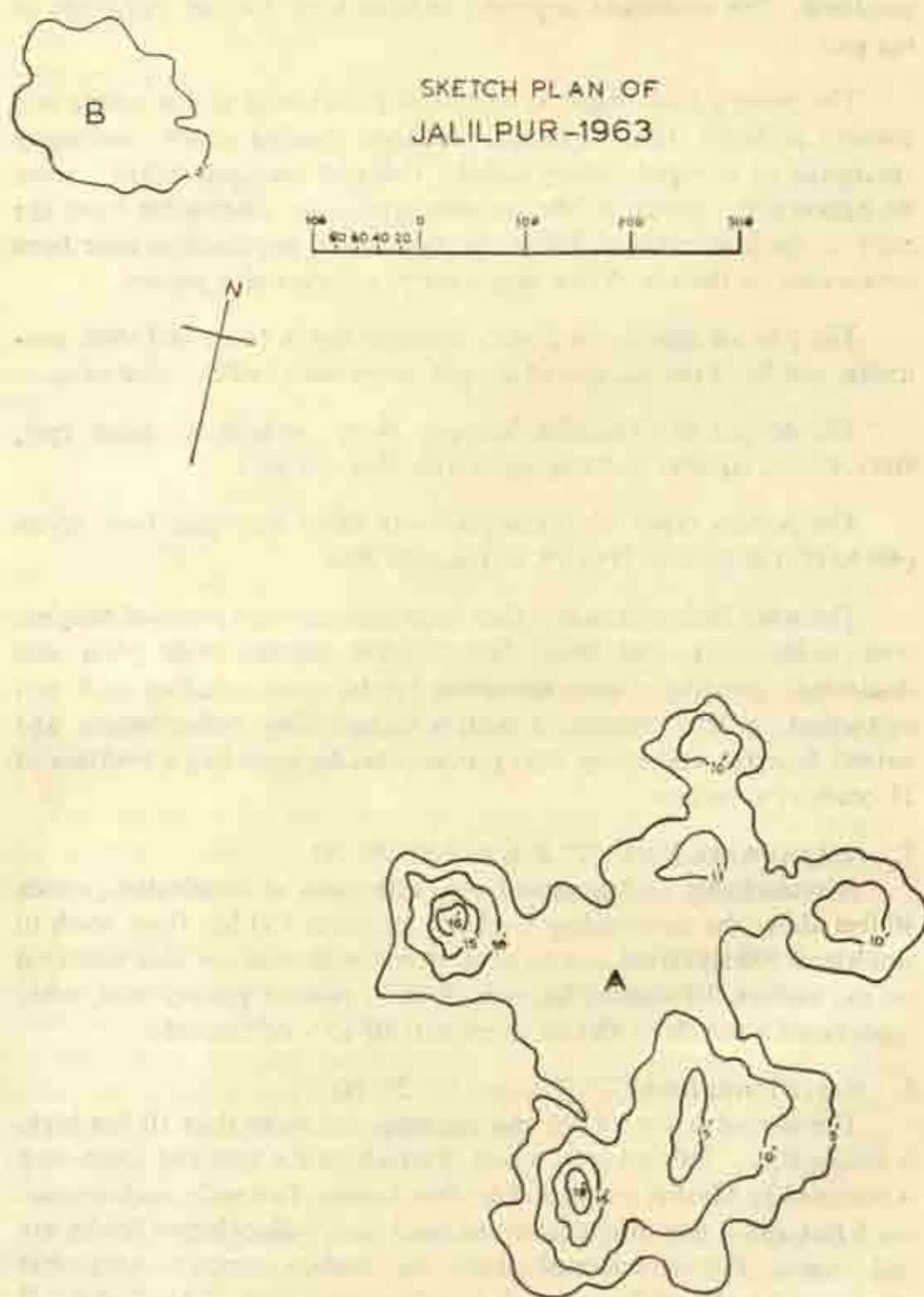
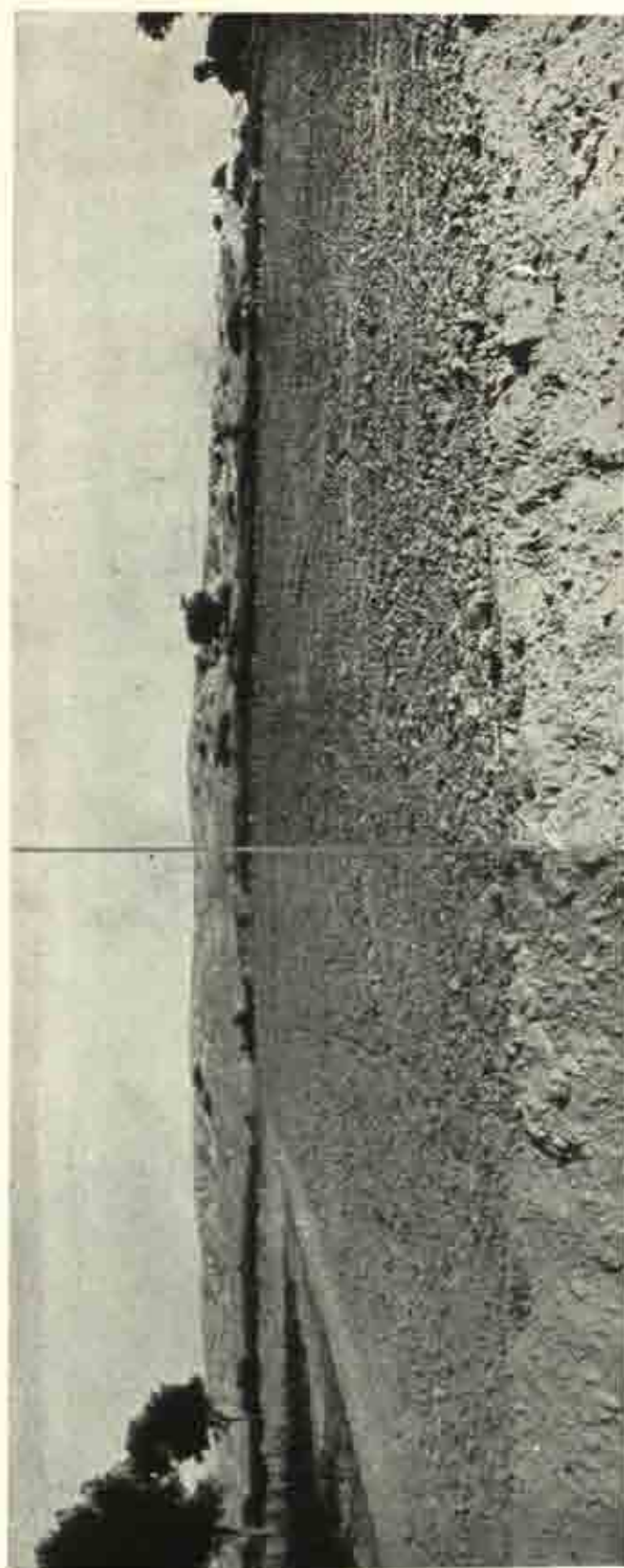
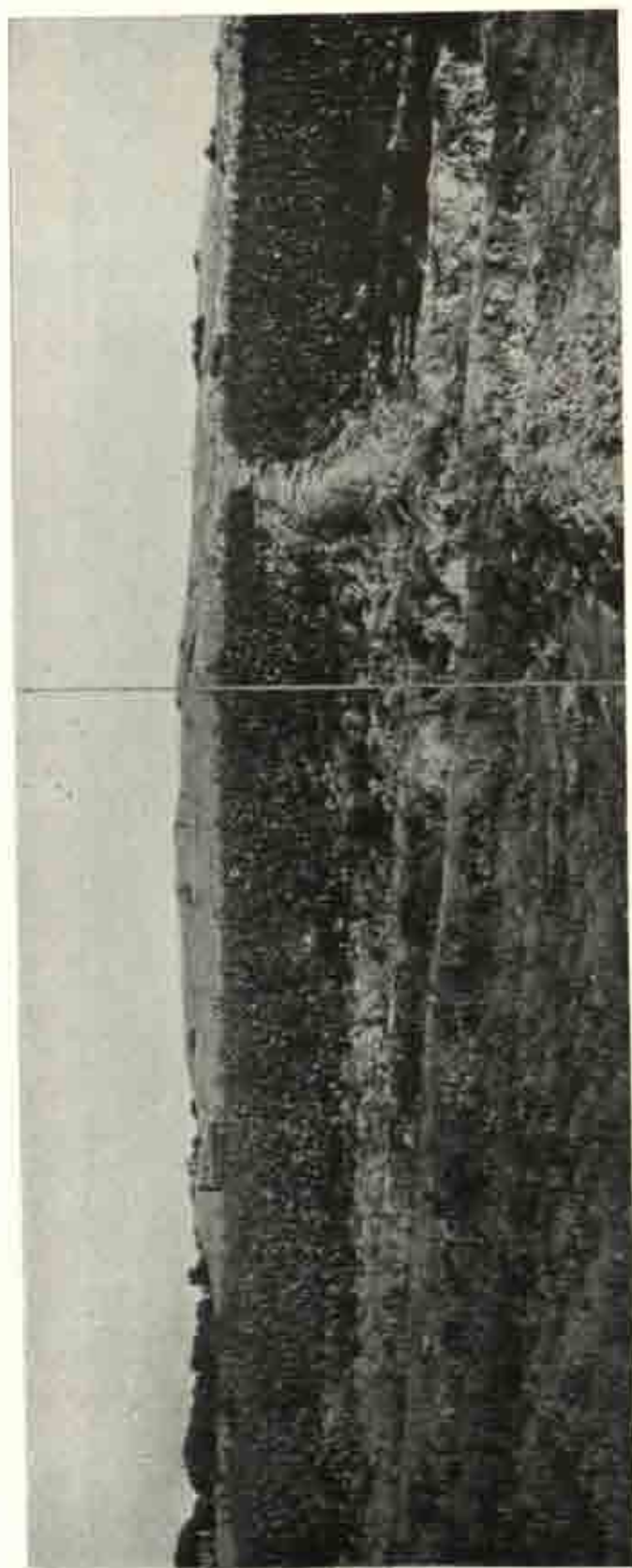


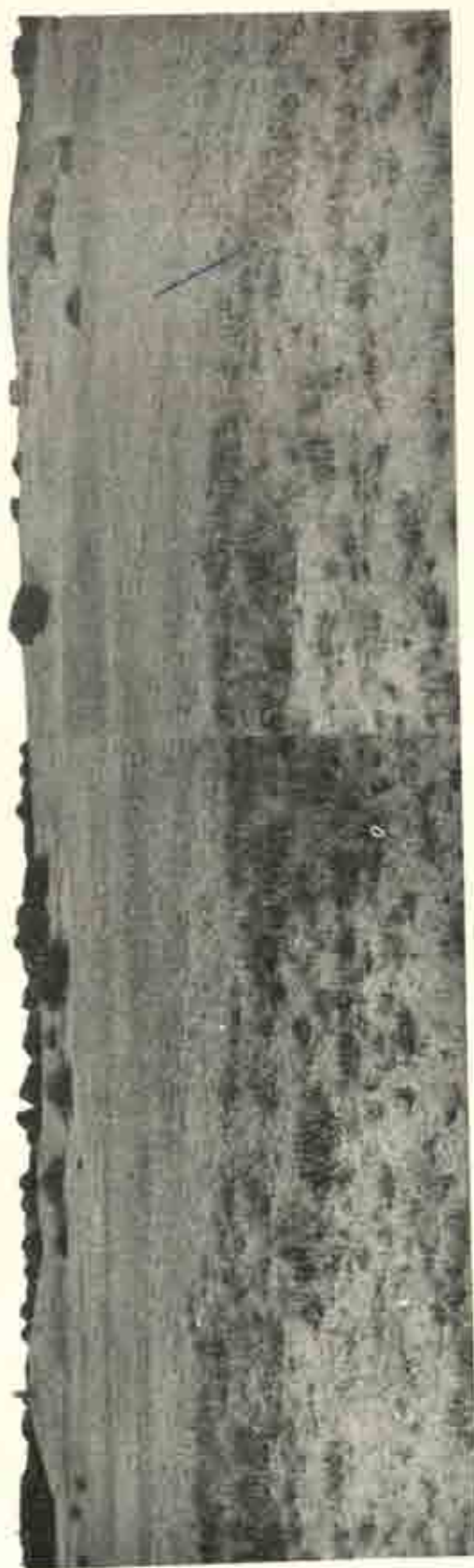
FIG. 1. Contour plan of Kot Dijian site of Jalilpur.



General view of Ratta Bhir from south.



General view of Mamura Bhir from east.



General view of Kot Dijian site of Jalilpur.



1



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Pottery from Kot Dijian site of Jalilpur.

9. MAKHDUMPUR (72° 1' E and 3° 26' N)

The mound measures 750 feet long from north to south and 550 feet wide from west to east and 18 feet in height. The surface revealed many burnt brick-bats. Stamped pottery showing circular and wheel designs like that of early levels of period III of Tulamba was present on the surface.

10. RATTABHIR (72° 5' E and 30° 26' N)

Due to the large number of potsherds scattered on its surface, the existing name, meaning the "red mound" is derived. It covers an area of 1250 feet from north to south and 1200 feet from east to west with a maximum height of 29 feet above the surrounding level (Pl. I). Stamped pottery and heavy textured vessels from the surface were comparable with those of periods II and III of Tulamba.

11. CHAK-11A (72° 10' E and 30° 25' N)

It measures 550 feet \times 350 feet with a height of 14 feet above the surrounding fields. The mound is well preserved. The surface shows a number of ovens and a concentration of ashes. Pottery types were comparable with those of period II to IV of Tulamba.

12. AFGHANGANJ (72° 7' E and 30° 30' N)

A small mound, only 5 feet high and measuring 400 feet across revealed on the surface some specimens of Tulamba Stamped Ware and plain pottery.

13. TEHSILDARWALA (72° 5' E and 30° 31' N)

An oval-shaped mound with fissured sides, measures 720 feet from north to south and 580 feet from east to west with a height of 21 feet. A part of the site is occupied by a Muslim shrine. The remains of mud brick walls, measuring 20 inches wide were detected on the surface. "Tulamba Stamped Ware" and pottery with impressed designs respectively belonging to periods III and II were present in the pottery collected from the surface. Two terracotta male figurines similar to those illustrated on Pl. XXVI, No. 1 and 2 were found.

14. MAMURABHIR (72° 2' E and 30° 17' N)

A greatly disturbed circular mound, measuring about 1100 feet across with a maximum height of 14 feet (Pl. II), revealed specimens of painted pottery, some ware and burnt bricks measuring 11 \times 8 \times 1 inches. The finds are roughly comparable with period II to V of Tulamba.

15. ALLAHABAD (71° 52' E and 30° 23' N)

A badly disturbed mound measuring about 800 feet across and 25 feet high revealed Tulamba Stamped Ware on the surface and plain pottery which is equated with that of periods II to III at Tulamba.

16. SUNGARWALA TIBBA¹ (72° 32' E and 30° 37' N)

A huge mound, measuring 1300 feet from east to west and 1000 feet from north to south, stands 45 feet high above the cultivated fields. The remains of fortification are suspected around the site. Pottery specimens were comparable with those of periods II to V of Tulamba. A copper coin of Aurangzeb Alamgir was picked up from the surface (Pl. XXXIII, No. 37). This site is situated in Layallpur district.

17. ATARI (72° 56' E and 30° 25' N)

A large mound measuring 400 yards from north to south and 250 yards east to west and standing more than 35 feet high is situated close to the modern village of Mubarakpur and more than one mile south-west of Atari. It was recorded as Atari by Alexander Cunningham. It has high fortification walls and the surface is littered with much "Tulamba Stamped Ware". Another small mound is situated north of Atari, near Alipur.

18. VAINIWAL² (72° 58' E and 30° 6' E)

An extensive mound measuring 1000 × 800 feet is situated on the right bank of dried up course of the Beas river (Fig. 1). The mound is remarkably well preserved and stands to a maximum height of 28 feet above the surrounding level.

The surface revealed pottery of characteristic Harappa culture, both plain and painted. Dish-on-stands, perforated ware, large vessels with bright red slip and painted specimens in black-on-red consisting of intersecting circles and 'pipal' leaves were present.

In 1963, from the north-eastern slope and the adjoining flat area some potsherds of dull-red, pale-red, and red ware, thin bodied and having short everted rims were collected. Some showed a simple black line painted on the rim. The ware resembled typical Kot Diji pottery.³

1 The site was first visited by the late lamented Mr. Mohammad Idrees Siddiqui, Assistant Superintendent of Archaeology.

2 Much before writer's visit the site was discovered by Mr. Waliullah Khan, formerly Superintendent of Archaeology and Mr. Ishtiaque Khan, now Assistant Superintendent of Archaeology.

3 Dr. F.A. Khan, *Excavation at Kot Diji in Pakistan Archaeology*, No. 2, 1965.

19. JALILPUR (72° 7' E and 30° 32' N)

Forty-six miles south-west of Harappa and one and a half miles south of Abdul Hakim town, a characteristic Kot Diji site was located close to the village of Jalilpur. The Ravi flows at a distance of three miles north of the site. A group of closely connected mounds, designated 'A', measuring 500 × 690 feet with a maximum height of 18 feet above the surrounding level (Pl. III). Another circular mound, 'B' measuring 200 feet in diameter is situated north-west of the mound 'A'. (Fig. 1). Not only the surface but the area in between the two mounds and around was littered with potsherds. The site must have covered at least 1400 × 1000 feet area originally. The presence of stamped pottery on a part of mound 'A' indicated its occupation in the medieval period. In view of the importance of the site, its surface finds may be described in detail.

The majority of potsherds represented characteristic Kot Diji ware, consisting of short rimmed pieces of red colour fine fabric, well fired and painted in black over or without red slip. Some specimens were unpainted, thin bodied and of light-pink or red colour. The painting is done mostly with black colour on the neck. Occasionally dark brown on the exterior surface of the vessels with red or brown paint on the inner side of the rims also occurs. The designs consist of a cross-hatching. The fish-scale pattern is not represented on any sherd from the surface. Attention should be drawn to a red piece showing a group of vertical zigzag lines painted in dark brown, (Pl. IV, No. 5), similar to those found in the Quetta Valley. There is a piece of a thick-bodied large jar on which painting is done with black on buff slip, (Pl. IV, No. 2). Its texture, painting and surface treatment recalls parallels with the site of Kulli culture in Las Bela.

The forms include large vessels, short necked globular pots, small cups, bowls, lids and vases (Fig. 2). An inscribed piece (Fig. 2, No. 5), was the only specimen found from the surface. Dish-on-stand, both tall and squat, were also represented but not a single sherd of perforated ware was found on the surface.

The small finds consist of two bull figurines of terracotta with short legs and prominent hump, a number of terracotta bangles of red and grey colour, two chert blades, a fragment of terracotta drain, two broken biconical terracotta beads and one shell piece. Triangular 'cakes' were absent.

The unpainted pottery with a very short neck is comparable with the pale-red pottery recovered from the early levels of Kot Diji.¹ The grooved and painted exterior is related to those found from pre-defence levels of Harappa and from the surface at Bhoot. It seems that the Kot Diji culture embraced a fairly large area as is evidenced by the occurrence of Kot Diji ware at Harappa,² Jalilpur, Vainiwal and Bhoot³ in Panjab, Kalibangan⁴ in Rajasthan (India), lower level of Amri;⁵ in Sind, Spina-ghundai near Pashin⁶ and at Periano-ghundai⁷ in North Baluchistan.

The following specimens of pottery are selected for illustration:—

FIG. 2

1. Fragment of a vessel of red ware with a flange at the neck, painted in black on deep-red slip. The rim is painted with red internally. Many specimens of this type were found on the surface among which some are thin bodied and well-fired.
2. Fragment of a vessel of deep-red ware, well-fired and grooved externally on which deep-red slip is applied. A black band is painted around the neck which goes over the rim. The inner surface of the neck is painted with red. Other similar specimens show deep-red and light-red bands on the body. It should be pointed out that the series of grooves on the exterior surface, as found at Jalilpur, do not occur as the type of site at Kot Diji, but have been reported from Harappa⁸ and Bhoot,⁹ both sites situated in Panjab.
3. Fragment of a globular vessel of red ware with carinated neck and short under-cut rim. It is painted with black on the shoulder and neck on deep-red slip externally while a red band runs inside the neck.
4. A piece of a cup of dull-red ware with carination near the base and painted with black on light-red slip.
5. Fragment of an inscribed short-necked vessel of dull-red ware. There are marks of red band around the neck. It was the only inscribed piece found from the surface.

1 Ibid., Fig. XXIII, Nos. 13 and 19; Fig. XXV, No. 4.

2 Sir Mortimer Wheeler, "Harappa 1946: the Defences and Cemetery R 37" in *Ancient India*, No. 3.

3 Henry Field, "Anthropological Reconnaissance in West Pakistan", 1959, Fig. XXXVI, Nos. 6 and 8.

4 B.B. Lal, "Illustrated London News", dated March 24, 1962, Fig. XII. Only three sherds, two in the middle and one on right (second from top) are typical.

5 J.M. Casal, "Fouilles D' Amri", 1964, Vol. II, Fig. 42, No. 33; Fig. 43, Nos. 42 and 43.

6 Writers collection in 1961, unpublished.

7 Dr. F.A. Khan's collection in the Exploration Branch, Karachi. Also W.A. Fairervis, "Archaeological Surveys in the Zhob and Loralai Districts", Fig. 52, Nos. d, f and i.

8 Wheeler "Harappa 1946" Fig. IX, No. 17; PL XLII, No. 7.

9 Henry Field's collection in the Reserve Pottery Room at Lahore. The pertinent piece is unpublished.

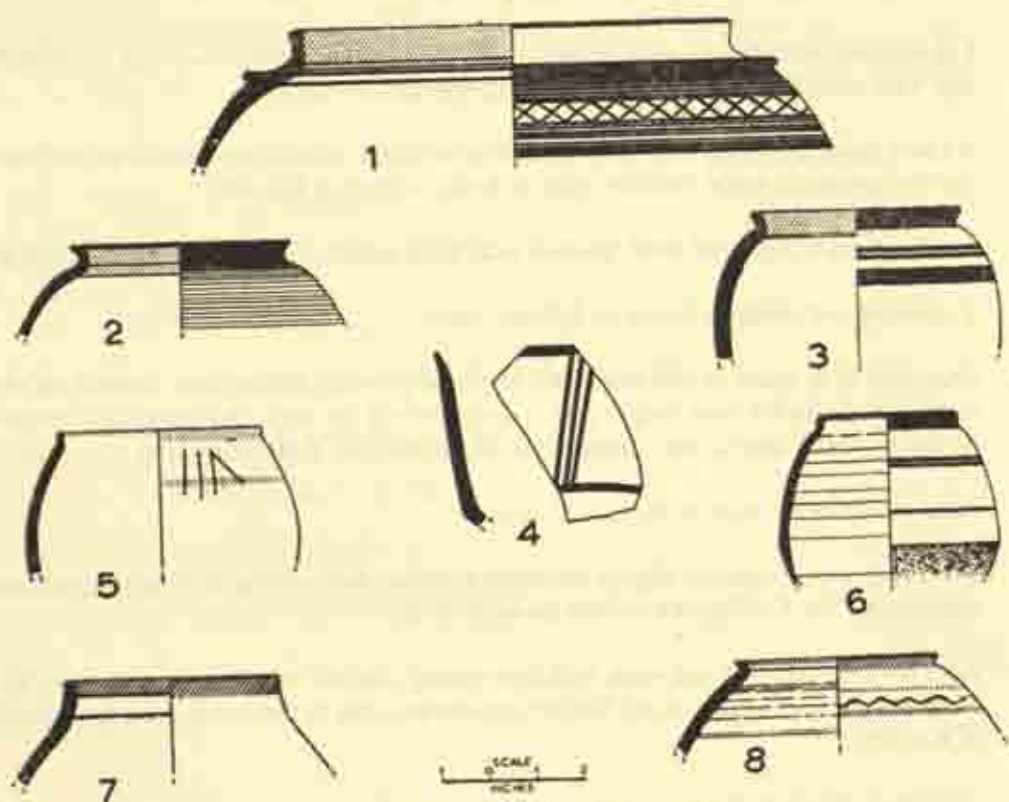


FIG. 2. Pottery of Jalilpur from surface.

6. Fragment of a bulbous vase with corrugated interior and black parallel lines on the shoulder and wide band is painted on deep-red slip externally. Below the carinated base the surface is rough. It is of red ware, fine fabric and well-fired.
7. Fragment of a vessel of dull-red ware, thick-bodied with a wide band in dark brown painted around the neck both externally and internally. Six similar specimens were found.
8. Fragment of a vessel of red-ware with short under-cut and everted rim, painted with brown on reddish slip.

PL. IV

1. Lid-fragment of light-red ware, showing thin parallel lines painted in black on whitish slip. One complete lid with painted flat top was also found.¹
2. A thick piece, probably of a large jar of coarse fabric painted with black on buff slip. Similar specimens came from the sites of Kulli Culture in Las Bela.²
3. Lid-fragment of light-red ware, painted with black parallel and wavy lines on buff slip.
4. Unpainted and unslipped neck of dull-red ware.
5. Fragment of a vessel of red ware well-fired and showing zigzag lines painted on the exterior with dark brown colour and a band around the neck. A zigzag motif occurs on the so-called Quetta ware, usually on the interior of "Plate or Platters".³
6. Piece (base) of red ware stamped with a circle.
7. Short neck of red ware red slip on the exterior surface and unpainted. Similar specimens characterise the Kot Diji ware from the early levels.
8. An over-fired piece of red ware with out-curved rim and wide band painted on the exterior with dark sepia colour. Similar specimens occur in the middle and upper level of Kot Diji.
9. Thin piece of vessel of red ware with short rim which is painted with black.

¹ Dr. F.A. Khan, *"The Indus Valley and Early Iran"* 1964, Pl. XLII, No. 2.

² Collected by the writer in 1962 from Karpas Bhutti and Jaroji in Welpat Tehsil of Las Bela. Now in the Exploration Branch, Karachi. Unpublished.

³ W.A. Fairervis, *"Excavations in the Quetta Valley, 1956"* Designs Nos. 151, 159 and 162; page 322, and Stuart Piggott *"A new pre-Historic Ceramic from Baluchistan"*, in *Ancient India*, No. 3, page 137, No. 22. Also from Mughal Ghundai, Stein, *Memoir No. 37*, Pls. XI and IV, p. 30.

EXCAVATIONS AT TULAMBA, WEST PAKISTAN

by
MUHAMMAD RAFIQUE MUGHAL

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EXCAVATIONS AT TULAMBA, WEST PAKISTAN

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INTRODUCTION

The history of the Panjab in the medieval period is replete with the successive rise and fall of various dynasties with invasions and wars, but, in the contemporary accounts, which are mostly embellished with details of kings and ministers, little light is thrown on the cultural changes affecting the life of the inhabitants in a specific area or during a particular period of history, to help understand the full impact of diverse cultural elements in different ages.

The very situation of Multan, in the plains of the lower Panjab and on the ancient high-road connecting Lahore with Sind and eastwards to the cities of northern India, rendered it strategically important. In the beginning of the 8th century A.D. Multan became the second capital of the Arabs and, later on, continued to be a centre of an important province during the Sultanate and Mughal periods, whenever the government at Delhi was strong enough to exert its influence.

Numerous architectural remains, scattered throughout the district of Multan, reflect styles, characteristics of a dynasty or period of history. Moreover, the modern boundaries of Multan district, enclosing an area of 5,630 square miles, is studded with countless mounds of potential significance, yet to be examined adequately or recorded.¹ Nearly a century ago, Sir Alexander Cunningham tried to identify some mounds located between the Chenab and Ravi rivers with some of the towns of the

¹ Syed Mohammad Latif listed 28 mounds in Multan district in "Early History of Multan", Lahore, 1963, pp. 48-51.

Mallois (Malli or Malavas), conquered by Alexander the Great in 326 B.C.² However, none was tested by excavation except the Multan Fort where two small wells were dug, one of which went down to the natural soil.³

The extent, nature and duration of the cultures before and after Alexander's invasion in the lower Panjab remained obscure. In the absence of comparative material and ceramic types, the sites of varying dimensions, occurring in great profusion in this part of Panjab, could not be assigned even to an approximate date. The excavation of a site with long occupation in the land of Mallois was, therefore, much needed to uncover the cultural relics from stratified levels and work out a chronological sequence which might point the way to further exploration and research. In this context, the limited excavations at Tulamba gave encouraging results.

ACKNOWLEDGEMENTS

The excavations at Tulamba was undertaken at the suggestion of Dr. F. A. Khan, S. I., T.Pk., Director of Archaeology and Museums in Pakistan. I am most grateful to him for assigning to me this pioneer task and for all his guidance and encouragement in the course of digging at Tulamba and during the preparation of this report. I am also thankful to Mr. S. A. A. Naqvi, T.I., Superintendent, National Museum of Pakistan, for the encouragement I received from him from time to time. I am obliged to Dr. Ahmed Hasan Dani, Chairman, Department of Archaeology, University of Peshawar for the decyphering of an inscribed potsherd and identification of some coins. I am grateful to Dr. Muhammad Abdul Ghafur, Superintendent of Publications, for his help in the decyphering of Muslim coins and many useful suggestions in the preparation of this report. Among my colleagues and friends in the Department of Archaeology who have helped me in various ways, I am most thankful particularly to Mr. Muhammad Sharif, Field Officer, for contributing a note on Bagar, to Mr. M. Abdul Halim and Mr. A. A. Farooq, Field Officers, for helping me in the arrangement of illustrations of pottery. Thanks are also due to Mr. Mehmud Baig, Librarian, Central Archaeological Library for his help in finding reference material.

² A. Cunningham, "The Ancient Geography of India", London, 1871.

³ Archaeological Survey of India Report, 1872-73, Vol. V, PP. 127-29.

TULAMBA 1963

DISTRICT MULTAN, WEST PAKISTAN

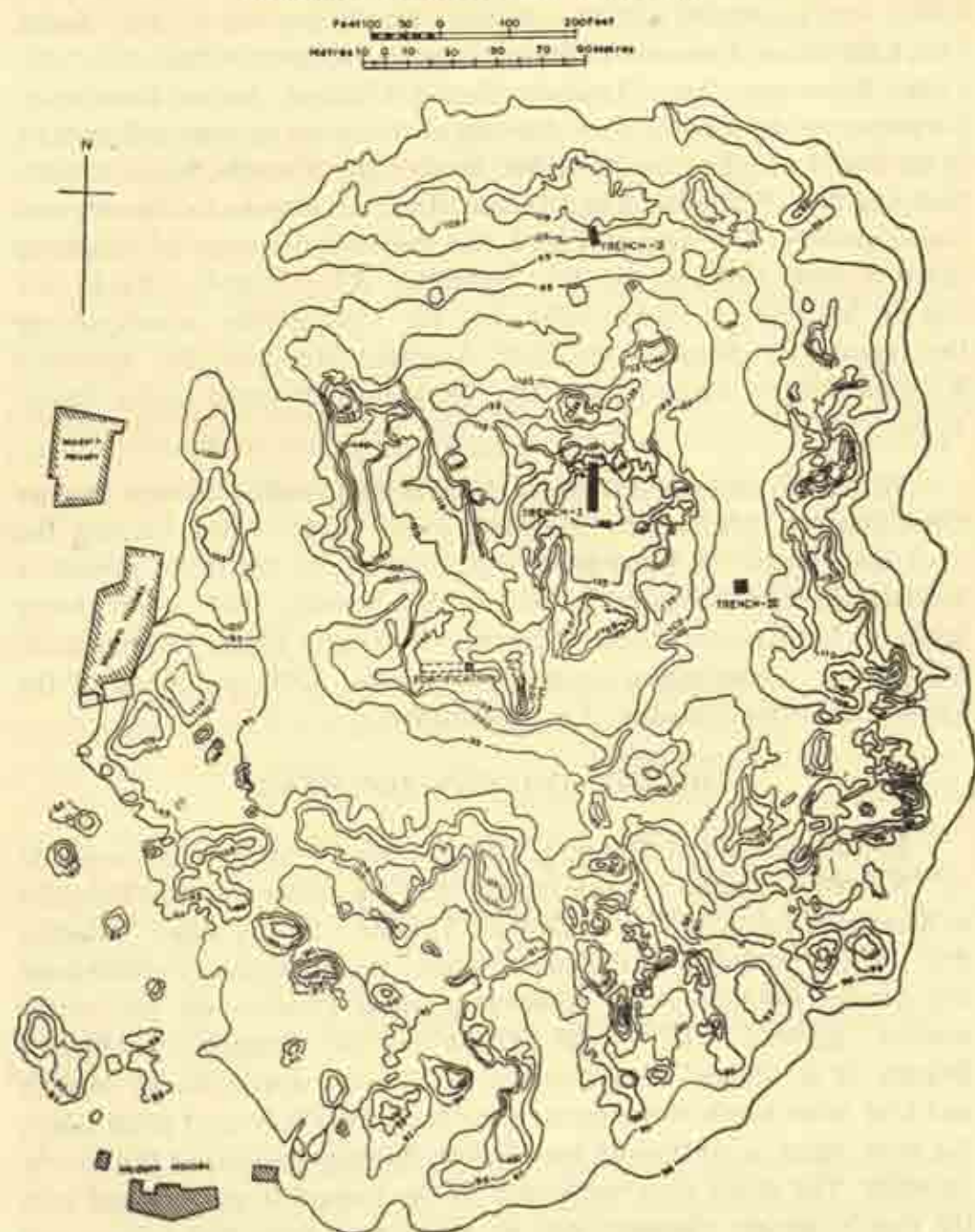


FIG. 2. Contour plan of Tulamba Bhir showing the location of excavated trenches.

Mr. Mohammad Ihsanul Haq Nadiem, Custodian, joined us in the last week of December, 1963. To his credit was the successful supervision of digging in the main trench. I am thankful to him for his help. A number of friends in the Exploration Branch of the Department and Directorate Office were associated with the digging. Thanks are due to Mr. Sadar Din, Exploration Foreman, to the late lamented Khawaja Ghulam Sarwar, Camp Supervisor, Mr. Manzoor Ahmed Siddiqui, Senior Draftsman, for preparing the contour plan, drawing of structural remains and sections in the field. Later, he joined with Mr. Hasinuddin Qureshi, Senior Draftsman and Mr. Nabiullah Khan Daudi, Head Draftsman in drawing and inking pottery. The map of Fig. 1 and the final drawings of structural remains were prepared by Mr. Nabiullah Khan Daudi. Thanks are due to Mr. Hasan Shakir Jaffri, for the photographs accompanying this report; Mr. Shaukat Ali Zaidi, Assistant Modeller; Mr. Ahmedur Rahman, Pottery Recorder and Mr. Ghulam Mohammad Lodhi, Stenotypist.

My thanks are also due to Mr. Izharul Haq Sheikh, the then Deputy Commissioner, Multan, for providing many facilities and keeping the Civil Rest House of Tulamba at our disposal for the entire period of Excavations from November 6, 1963 to 25th January, 1964; to Mr. Mehr Shakoor Mohammad Khan, Chairman and Mr. Ehsan Mohammad, Secretary for contributing a token sum of Rs. 1,000, on behalf of the Town Committee, Tulamba, for Excavations.

THE SITE AND ENVIRONMENT

The ancient site of Tulamba, Latitude 30° 31' North and Longitude 72° 15' East, is situated one mile due south of the modern town of Tulamba in Khanewal Tehsil of Multan District. The site is locally called 'Tulamba Bhir'. The great height of the mound makes it conspicuously visible from the nearby metalled road connecting Mian Chunnu on the north-western railroad with Abdul Hakim on the Khanewal-Wazirabad Branch. It is situated at a distance of 51 miles north-east of Multan and four miles south of the present day bed of the Ravi at a point where the river takes a northward turn before flowing south-west for nearly 10 miles. The sandy tract north-east of the mound is still marked with the river's ancient channels, one of which runs from east to west and then turns almost at a right angle to the north, and thus comes within a distance of two miles north-east of the ancient site or one and a half miles

due east of the modern town. In fact, an ancient course of the river is indicated as far as five miles south of the present bed for 20 miles east of Tulamba Bhiri and 12 miles south-east south of Kamalia (Fig. 1). It is clear that the Ravi, near about Tulamba, has shifted northwards and thus was partly responsible for the abandonment of the ancient site.⁴ But the change in the river course, near Kamalia, was at least 4 miles towards the south and now forms a large loop.⁵ Further eastwards, and to the north-east in which Harappa is located, the area south of the main stream is dissected by ancient beds of the Ravi as observed near Tulamba. It is to be noted that there is no evidence to show that Ravi ever flowed south or west of Tulamba.

The mound of Tulamba towers 74 feet above the vast and intensively cultivated plain, covering a maximum area of 1630 feet from north to south and is 1220 feet broad⁶ (Fig. 2). A series of disturbed mounds having a maximum height of 40 feet surround an inner mound of square shape. The southern part of the mound is 600 feet broad which gradually decreases in both width and height as it encircles the central high mound.⁷ In the north-western corner, a 170 feet wide opening may suggest an inlet for water into an ancient moat which is marked by more than a hundred feet wide depression around the entire central mound except at its south-west corner.

The central part of the site is the highest, nearly 600 feet square with the remnants of two surviving bastions projecting out at the north-eastern and south-western corners. That it was fortified was further confirmed by the discovery of a fragmentary defence wall to its south (below, P. 36). The central part of the site is considerably eroded on the sides, amongst which the portion at the south-east corner is the highest, being 74 feet and gives a commanding view of the countryside around. The square fort now in the middle of the site appears originally to have stood north of the habitation site. The surrounding mounds of the site have been badly cut up by farmers to use the occupational earth as fertilizer in their fields.

4 Ibid., P. 111 and Op. cit., P. 225.

5 Topographical map No. 44B (1959).

6 Cunningham who visited Tulamba twice has erred greatly in the record of his observations and measurements when he said, "It consisted of open city, protected on the south by a lofty fortress 1000 feet square. The outer rampart is of earth, 200 feet thick, 920 feet high on the outer face, or faussebraie with a second rampart of the same height on the top of it". Op. cit., PP. 224 and 225. Also A.S.I.R., Vol. 5, P. 111.

7 Cunningham took the surrounding mounds as "ramparts", *ibid.* Also compare Cunningham's plan on PL XXXV, A.S.I.R., Vol. 5, with our recent map (Fig. 2). It is unlikely that contours of the site have changed so radically since Cunningham's visit in 1872-73.

NAME AND HISTORY OF THE SITE

The high mound, south of the modern town of the same name, represents, as the excavations also revealed, the earliest town or village settlement.⁸ The name "Manu Sher"⁹ applied to the existing mound is yet to be confirmed by documentary evidence. The legends ascribe the foundation of Tulamba to Raja Tal of unknown date, after whom, it is alleged, the ancient city was named "Tal Ubha"¹⁰ (the northern Tal), which does not appear to make sense in the present context. However, the other name "Tul Ubha",¹¹ meaning the "northern fort" appears to be linked with the prevalent name, Tulamba perhaps due to the location of square fort (or tower) on the northern side of mound.¹² But it is yet not known when the existing name was applied to the ancient settlement. The fort is mentioned as "Talmi" by Sharfuddin Ali Yazdi in his *Zafar Nama* while describing the invasion of Timur in A.D. 1398.¹³ The present name appears to have originated sometime after the 15th century A.D.

In 326 B.C., when Alexander's troops landed at the confluence of the Hydaspes (Jhelum) and Acesine (Chenab) rivers, the territory on both sides of the Ravi (Hydraotes), the south-west of the Rachna Doab and north-west of the Bari Doab in which Tulamba mound is also situated, was held by the powerful but independent Mallois (Malli or Malavas). Alexander surprised them by two forced marches across the waterless country in order to prevent the Mallois from joining hands with their neighbours, the Oxydrakai occupying the upper course of the Hyphasis (Bias) against the Greeks. After their initial defeat nearabout or at Kot Kamalia¹⁴ they crossed the Ravi while under attack of Alexander and took refuge in the nearest town well fortified "both by art and nature".¹⁵ According to Arrian,¹⁶ whose description of Alexander's campaigns against the Mallois is more detailed than that of Curtius, Diodorus and

8 The "cities" recovered by the Greek historians represented small settlements in Alexander's time. J.F.C. Fuller, *The Generalship of Alexander the Great* 1958; Footnote 4 on page 261. The survey of surrounding area confirmed it.

9 Gazetteer of Multan district, 1923-24, page 291.

10 Ibid. Similarly Cunningham has mentioned Kulamba or Kulambha but gives no meaning. A.S.I.P., Vol. V, page 112.

11 Ibid.

12 It is pronounced as "Tulamba" even today and not Talamba as spelled on the maps. It is retained by the writer without attempting to suggest its connection with "Tul Ubha".

13 Edited by Maulvi Muhammad Ibadat in *Bibliotheca India Series*, Calcutta, 1888. Vol. 11, pages 52-53 and 58 and 59. I am grateful to Mr. Ahmed Nabi Khan, Assistant Superintendent of Archaeology for drawing my attention to it.

14 A. Cunningham, *Ancient Geography of India*, 1871, pp. 208-10.

15 Anabasis, VI, 3.

16 Ibid. 6 to 9

Plutarch, the fortress was taken at the first assault by Peithon with one brigade of Alexander's infantry and two regiments of cavalry. Assuming that the first town attacked by Alexander was the high mound of Kamalia, a night's march towards south-west for 28 miles would have brought the Macedonians opposite to Tulamba where the Mallois had taken refuge. Alternately, a southward march for 7 or 8 miles from Kamalia to the ancient bank of the Ravi and opposite to modern Chichawatni was unlikely. The distance was so short that it would be covered within few hours and not, as Arrian says, by day-break. Moreover, the exploration of 1963 along the left bank of the river revealed no other mound of great size that could rival Tulamba Bhir within an area of 8 to 10 miles wide, upto Chichawatni. True, the extent of occupation in pre-Alexander days at Tulamba is unknown as with other sites, but its proximity to the ancient bed of the Ravi may favour its identification with the first citadel captured by Peithon. Cunningham's argument, based on Diodorus account, that the people named Agalassae who opposed Alexander, "evidently refers to Tulamba and that the name of the city (Tulamba) may be Agala or Agalassa is to be considered in the light of the fact that the Agalassians fought with Alexander *before* he marched against the Mallois.¹⁷ Raverty's statement suggests that before Alexander crossed the Ravi, his forces stormed a fortified city of the Mallois, and then reaching the left bank of the river on which Tulamba is located arrived at a Brahman city.¹⁸ This is in conflict with Arrian's city of Branchmans"¹⁹ which was conquered by Alexander himself after the fall of Tulamba by Peithon.

According to Arrian, the city of Branchmans gave a tough battle to Alexander who was himself leading the attack. Alexander Cunningham identifies this city with the huge mound at Atari, situated on the road to Kabirwala, 11 miles south-west south of Sarai Sidhu and 19 miles south-west of Tulamba. Since Cunningham's survey, more sites have been located between Tulamba and Atari, among which at least two mounds, Bagar and Kalkanwal Bhir, respectively 14 and 12 miles far from Tulamba can have equal claim. Therefore, one of these large mounds may represent "the largest city of the Mallians" which was abandoned when Alexander advanced against it as did the inhabitants of other towns.²⁰

17 Op. cit., P. 227.

18 H.G. Raverty, *The Mithran of Sind and its Tributaries*, in J.A.S.B., Vol. LXI, 1892, foot-note 360.

19 Anabasis, VI, 7.

20 Raverty (op. cit.) expresses doubt about the existence of a large number of cities but the explorations have corroborated the Greek accounts.

Alexander's successful campaigns on the left (east) bank of the Ravi finally led him to the right bank again, where the Mallois had mustered a large force in order to obstruct Alexander's passage. Alexander's sheer audacity in crossing the river stupefied the Mallois who shut themselves in the city and gave Alexander a last but tough resistance in which he was seriously wounded. The city was eventually taken with severe losses on both sides.

It may be noted that this bloody fighting took place somewhere on the right (west) bank of the Ravi in the Rachna Doab.²¹ Cunningham identified the "Capital of the Mallois" with Multan, situated 51 miles south-west of Tulamba, assuming that Alexander marched south-wards from Atari and that the Ravi flowed close to Multan in those days.

There is no indication in the Greek account of Alexander's march towards the south-west or south to suggest that some city now known as Multan was captured. Instead, the battle was fought somewhere on the opposite side near the right bank of the Ravi which, at the time of the Arab invasion, joined the Chenab about 20 miles north-east of Multan (at present 37 miles) and it took four days to convey the wounded Alexander down to the Hydraotes (Ravi) up to its confluence with the Acesines (Chenab).²² Multan was situated far too much to the south or south-west.²³ Therefore unless evidence is gathered to prove that the Ravi flowed south and east of the city now called Multan; that Alexander took a south-ward route and that the junction of the Ravi with the Chenab was further away so as to require four days to reach it from Multan, it is difficult to identify Multan with the capital of the Mallois.

The Mallois finally submitted to Alexander who appointed Philip as viceroy over the conquered territories before marching along the Indus.

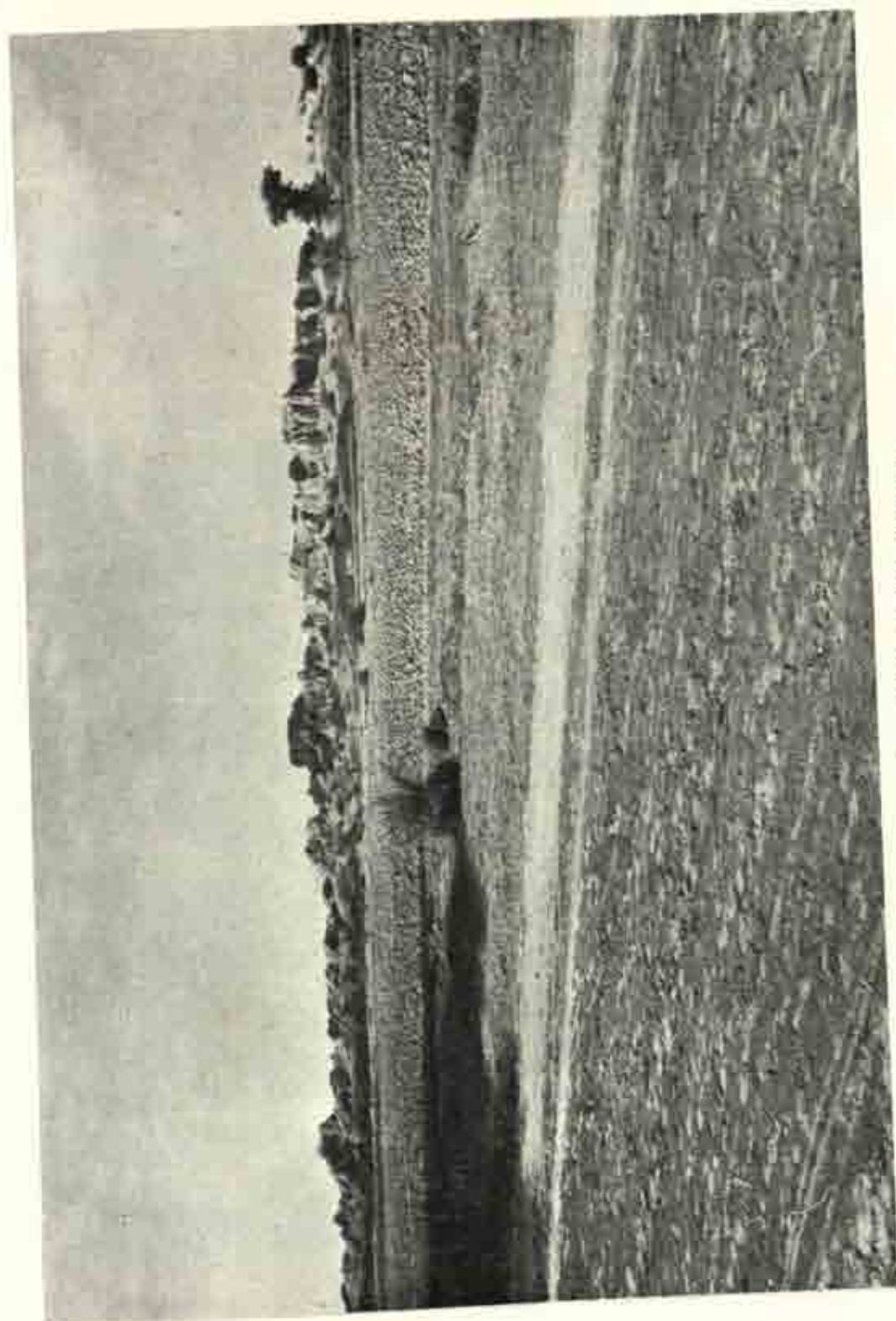
The post-Alexanderian era in the lower Panjab, the area of our present interest, is shrouded in obscurity like the rest of Panjab as to which scanty numismatic evidence only provides some hints. The discovery of Indo-Greek coins from known sites situated on the bank of Chenab and along the left bank of the Ravi, including Tulamba indicates a considerable degree of Indo-Greek influence, if no uninterrupted rule, over the

21 Ibid and *Anabasis*, VI, 8 & 9.

22 Op. cit.

23 Vincent A. Smith, "The Early History of India", 1904, P-89, Foot-note.

24 "Anabasis", VI, 14.



General view of Tulamba Bhir from east.



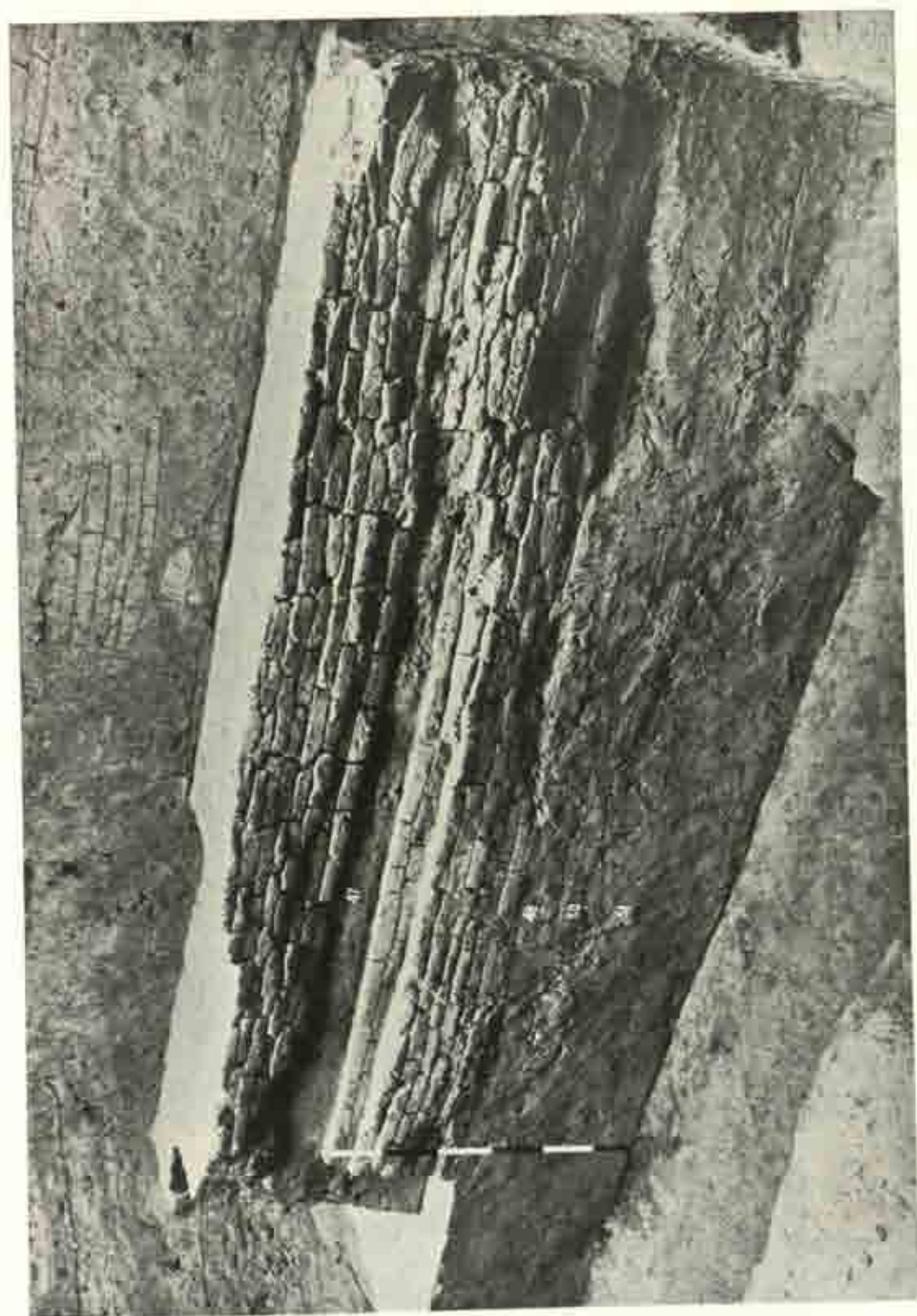
TLB I, Structural remains of Building Level 17, consisting of sand and burnt-brick walls and a brick-lined drain.



TLB-1, Floor Level of layer 25 and burnt-brick wall of Building Level 17.



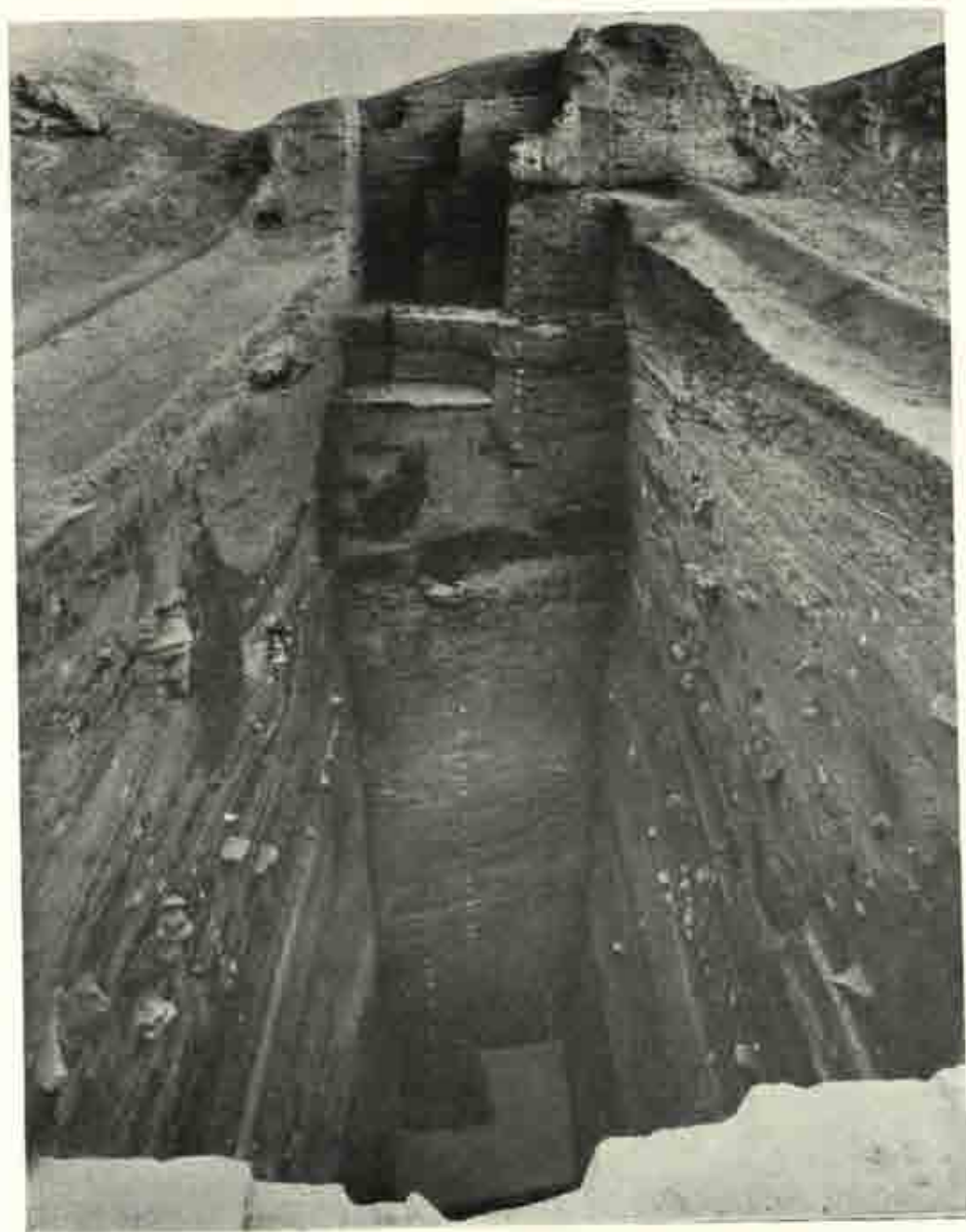
TLB-J, Mud-brick structures of Building Level 14 and painted mud floor with a square oven of Building Level 12.



TLB-1, Tulamba Bhir: Mud-brick wall of the Greek Period (Circa 2nd Century B.C.)
Mud-brick structure of Building Level 5.



TLB-I, The northern and a part of western sections from layer 17 to the Natural Soil in (58).



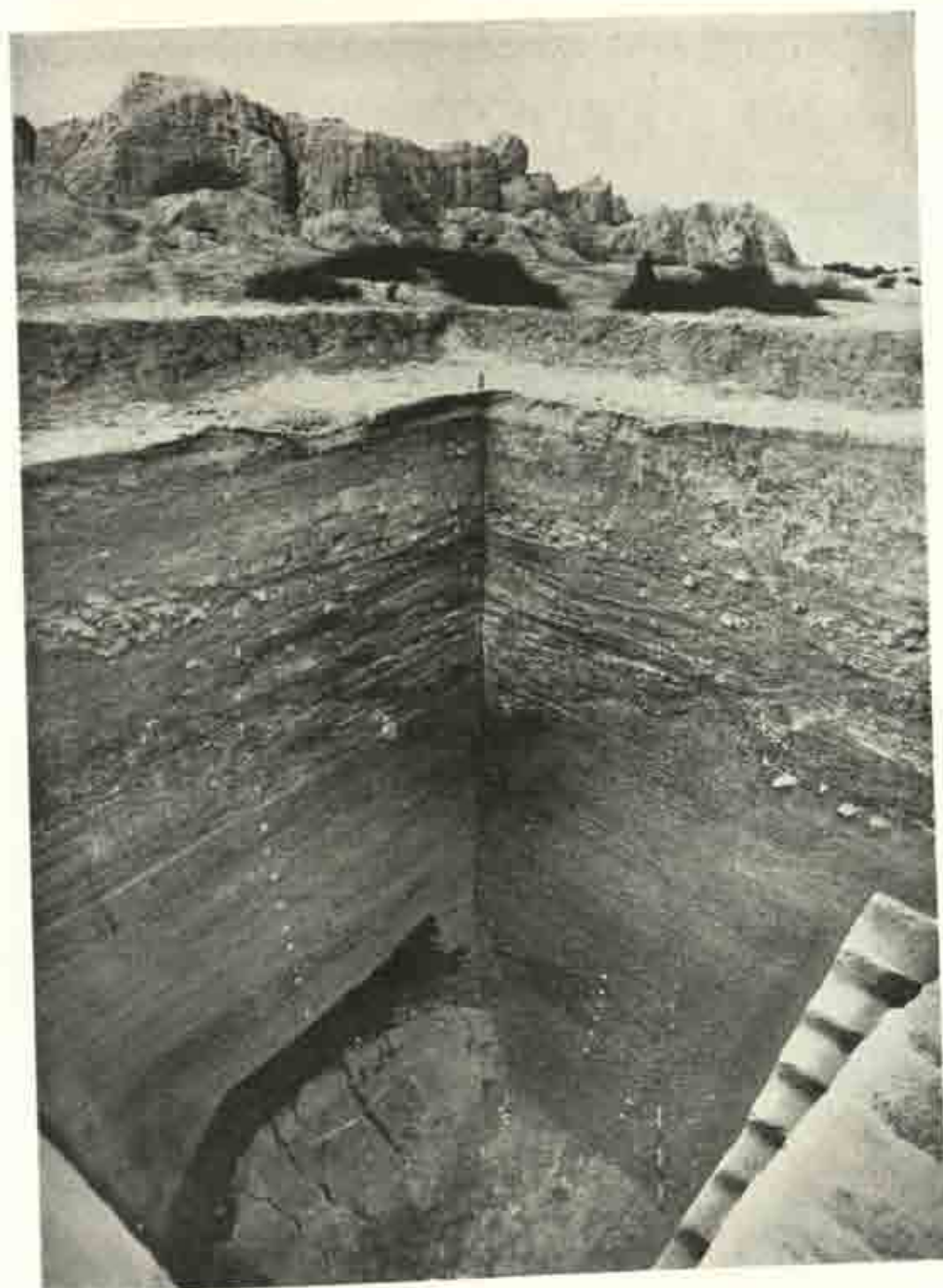
TLB-I, General view of the trench after excavation, looking north.



A. TLB-I, Marks of burning on the floor level of layer (18).



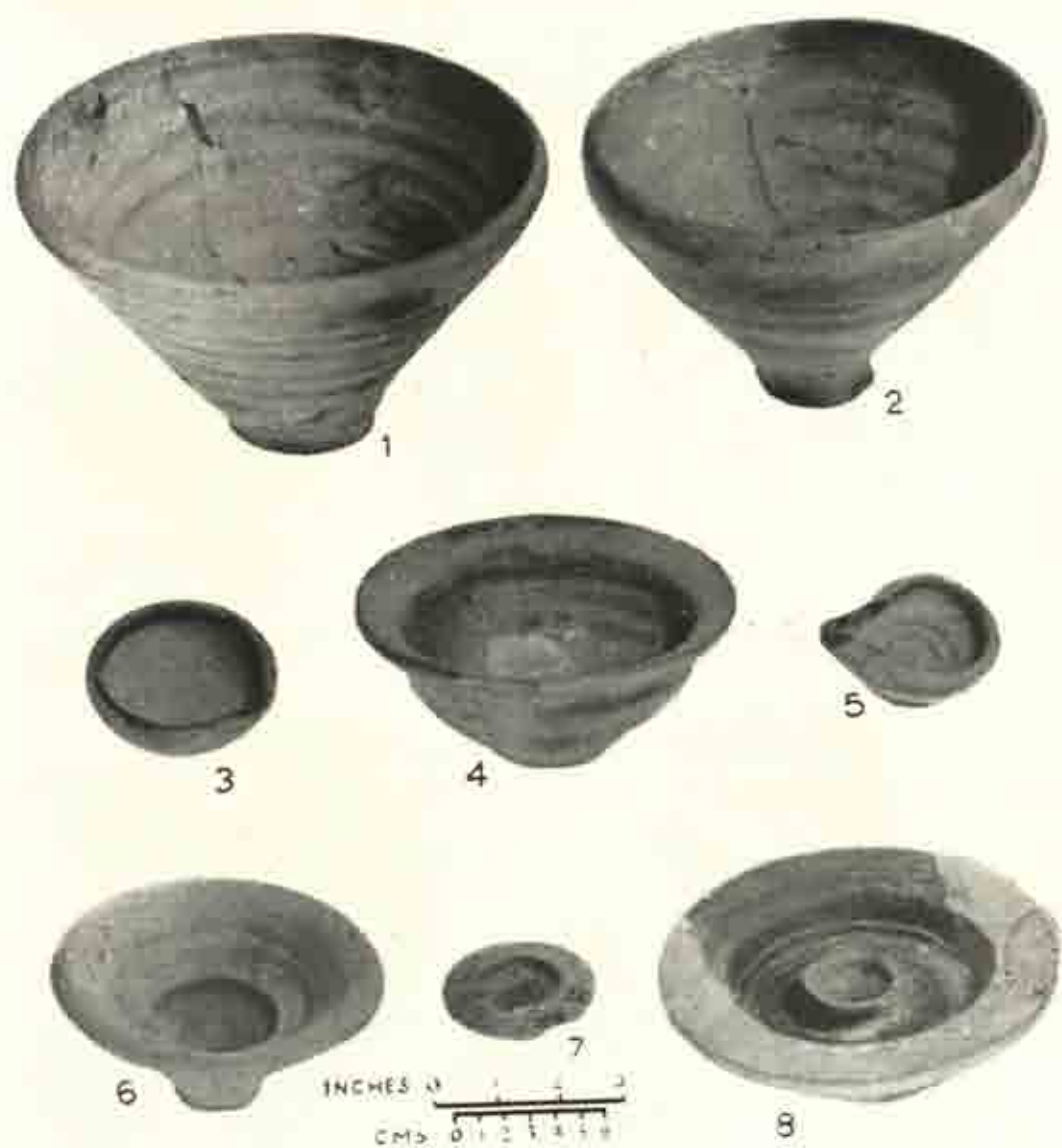
B. TLB-III, Skeleton of horse at the bottom of layer (10).



TLB III, General view of the trench, looking north-west (The layers below the silt deposits collapsed).



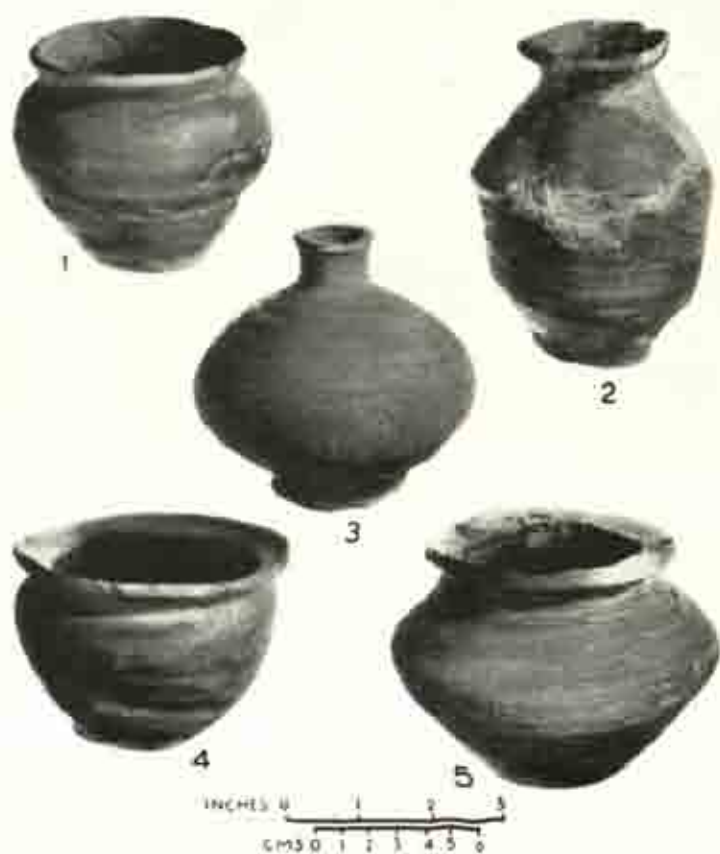
TLB-IV, Remnants of brick fortification, looking south-east.



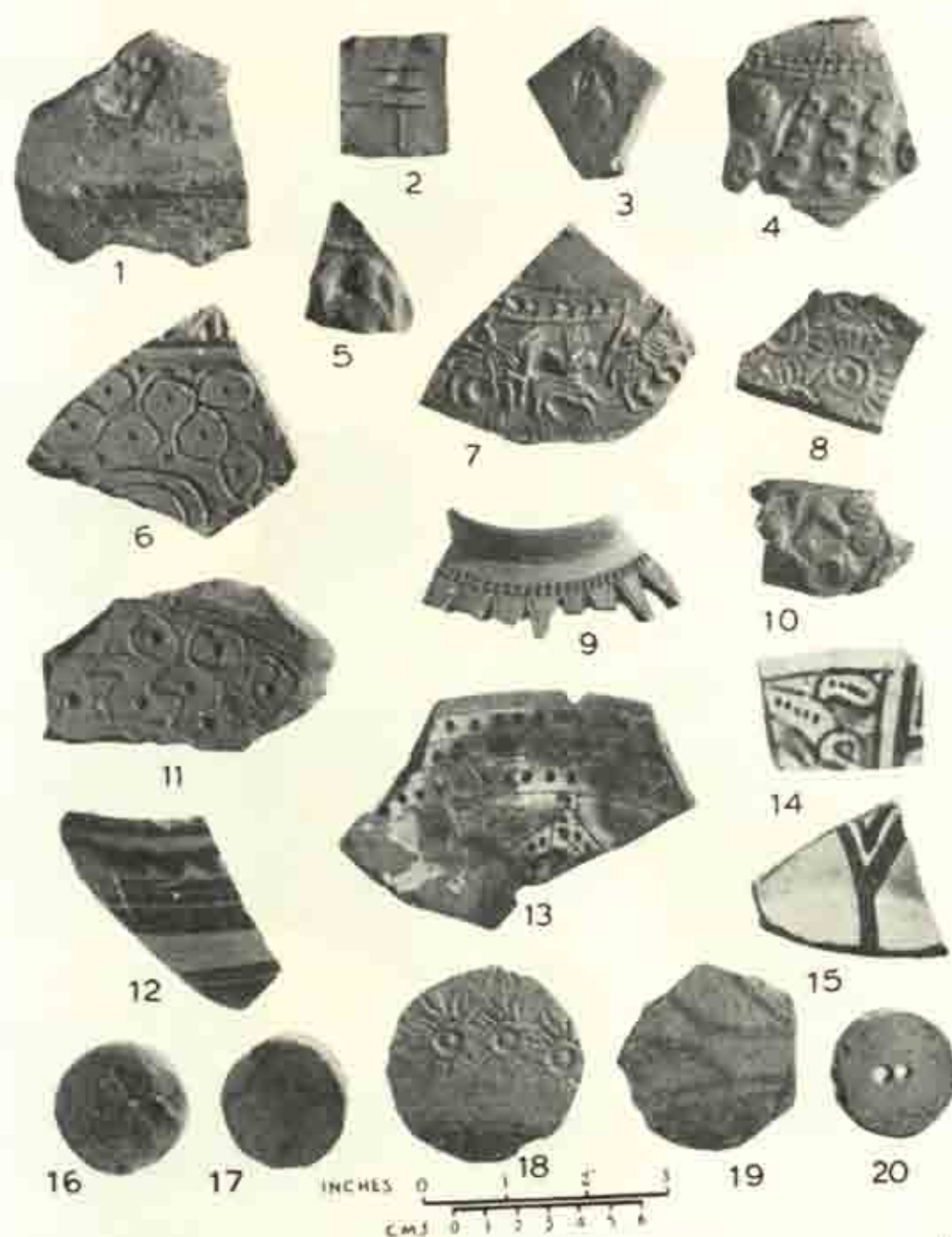
Pottery of Tulamba, periods II to II-B and IV to V-A.



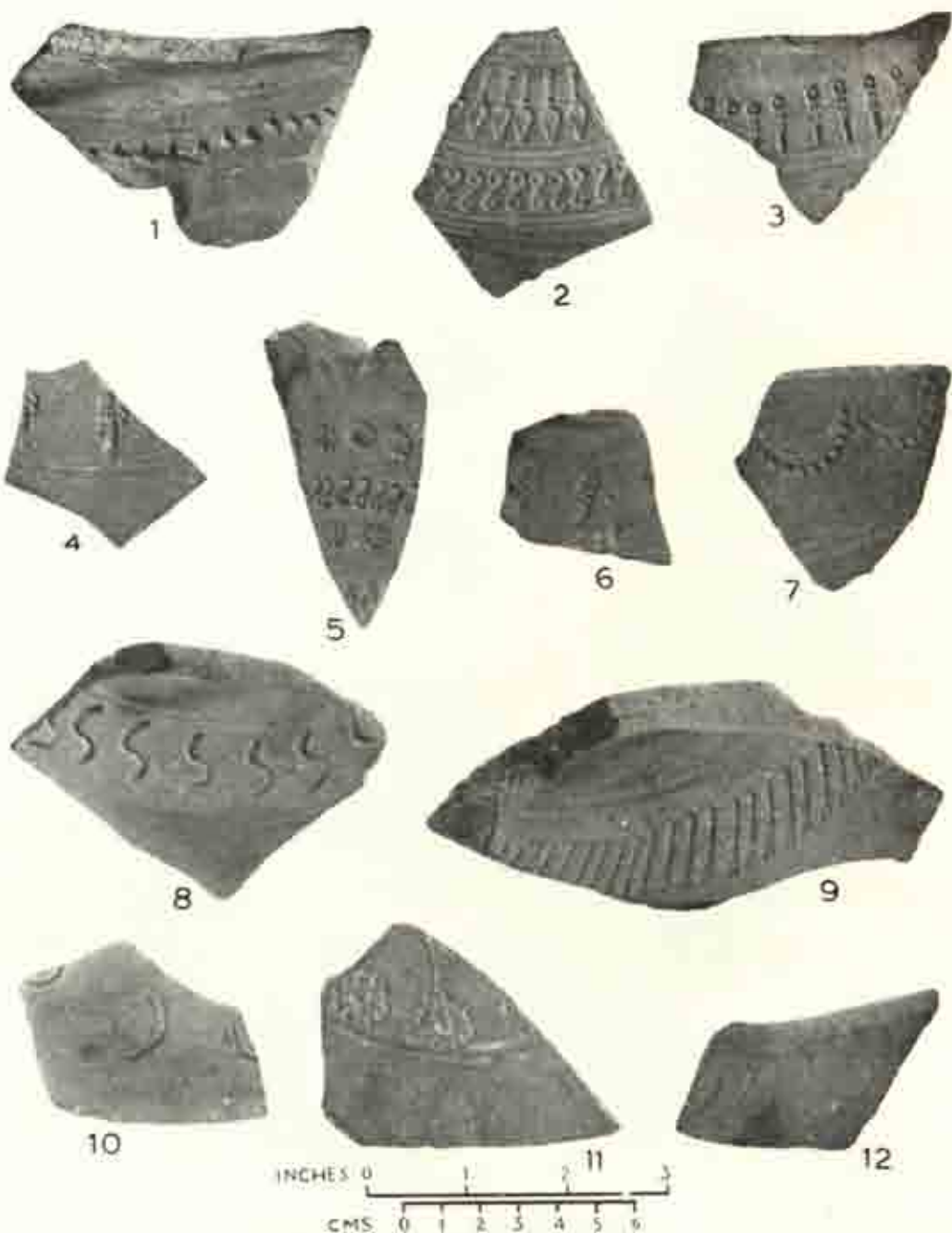
A. Miniature vases of periods II A to IV.



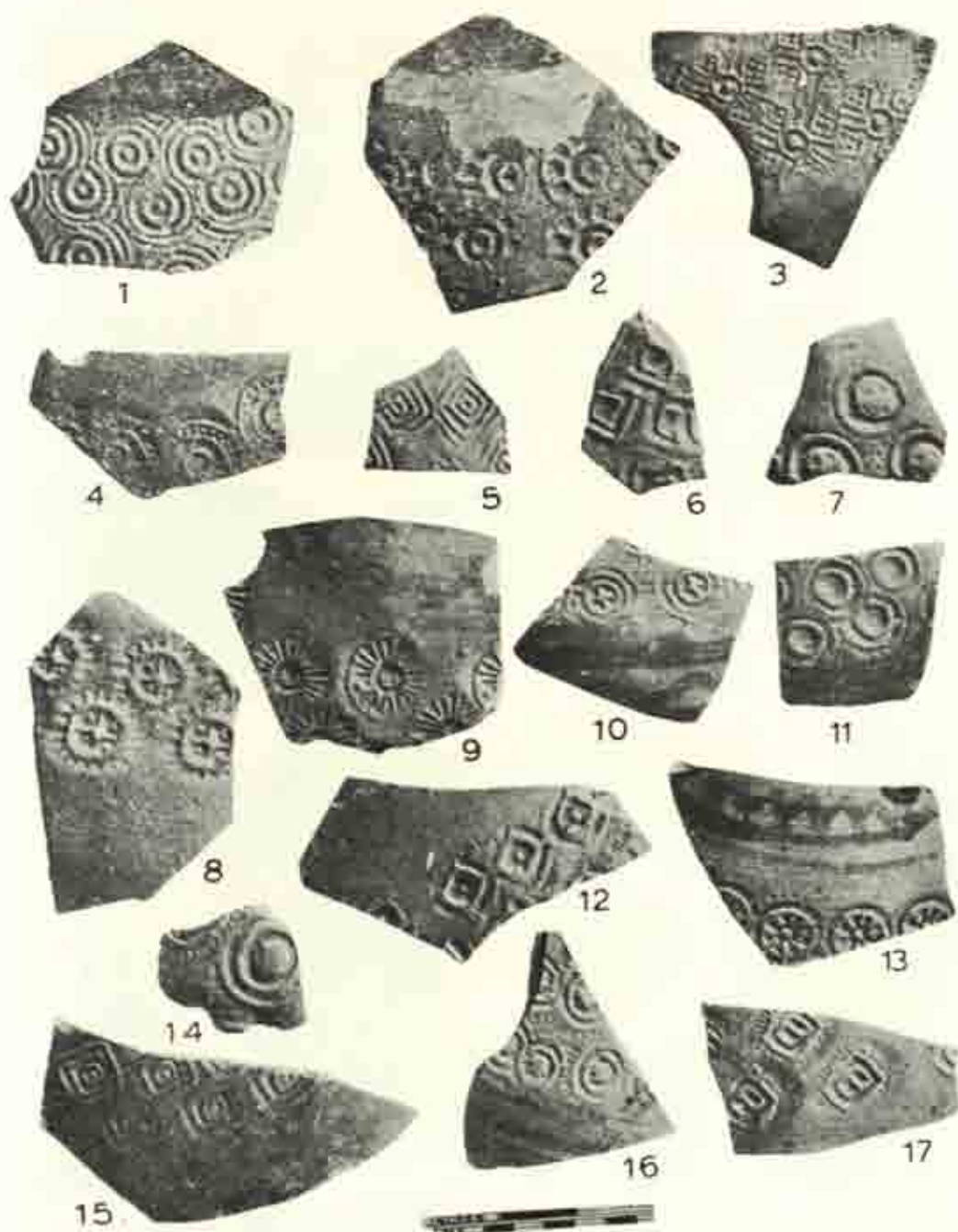
B. Miniature vases of periods III to V.



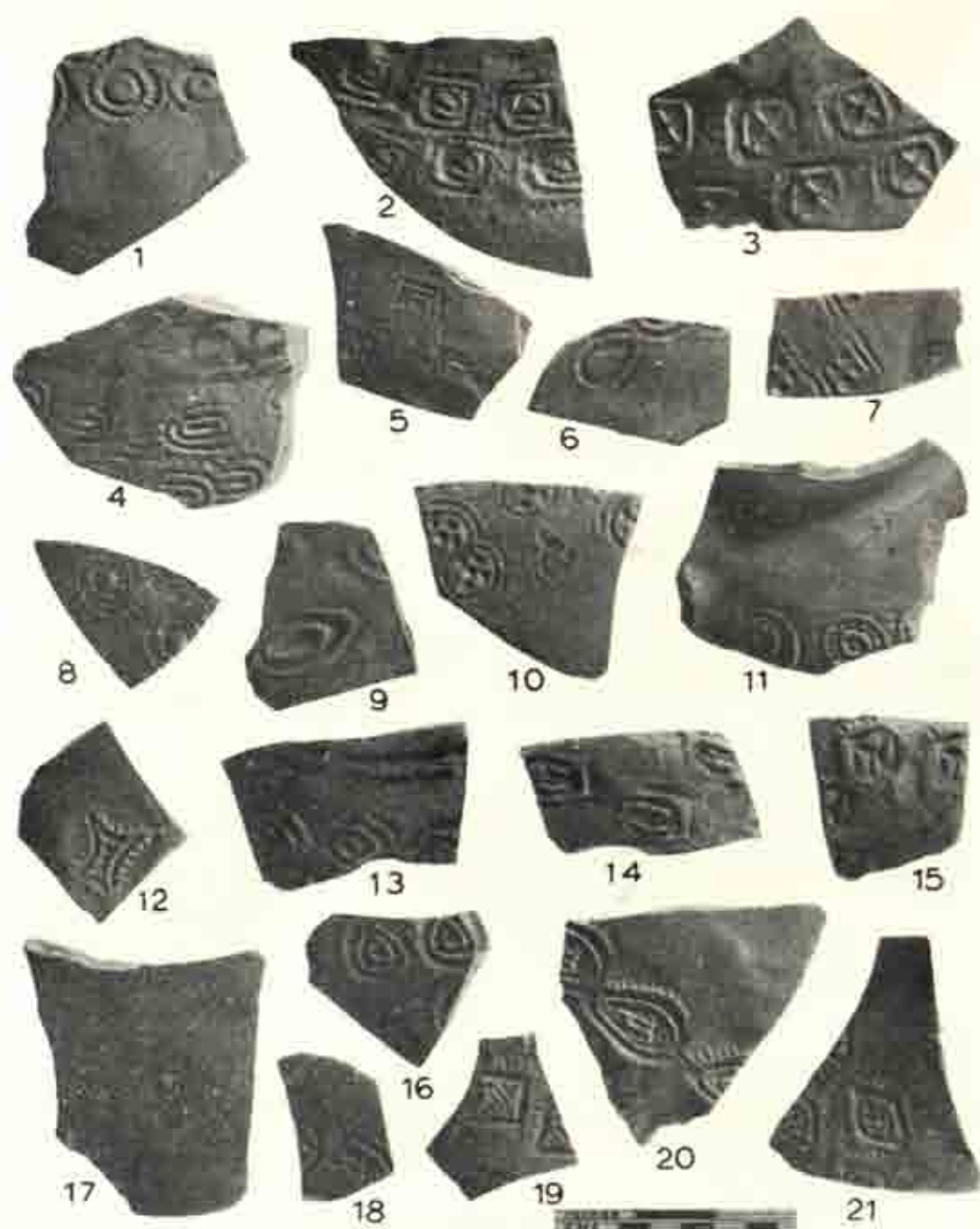
Miscellaneous potsherds with relief, cut and painted designs; glazed ware and pottery moulds and plain discs, Nos. 16 to 20.



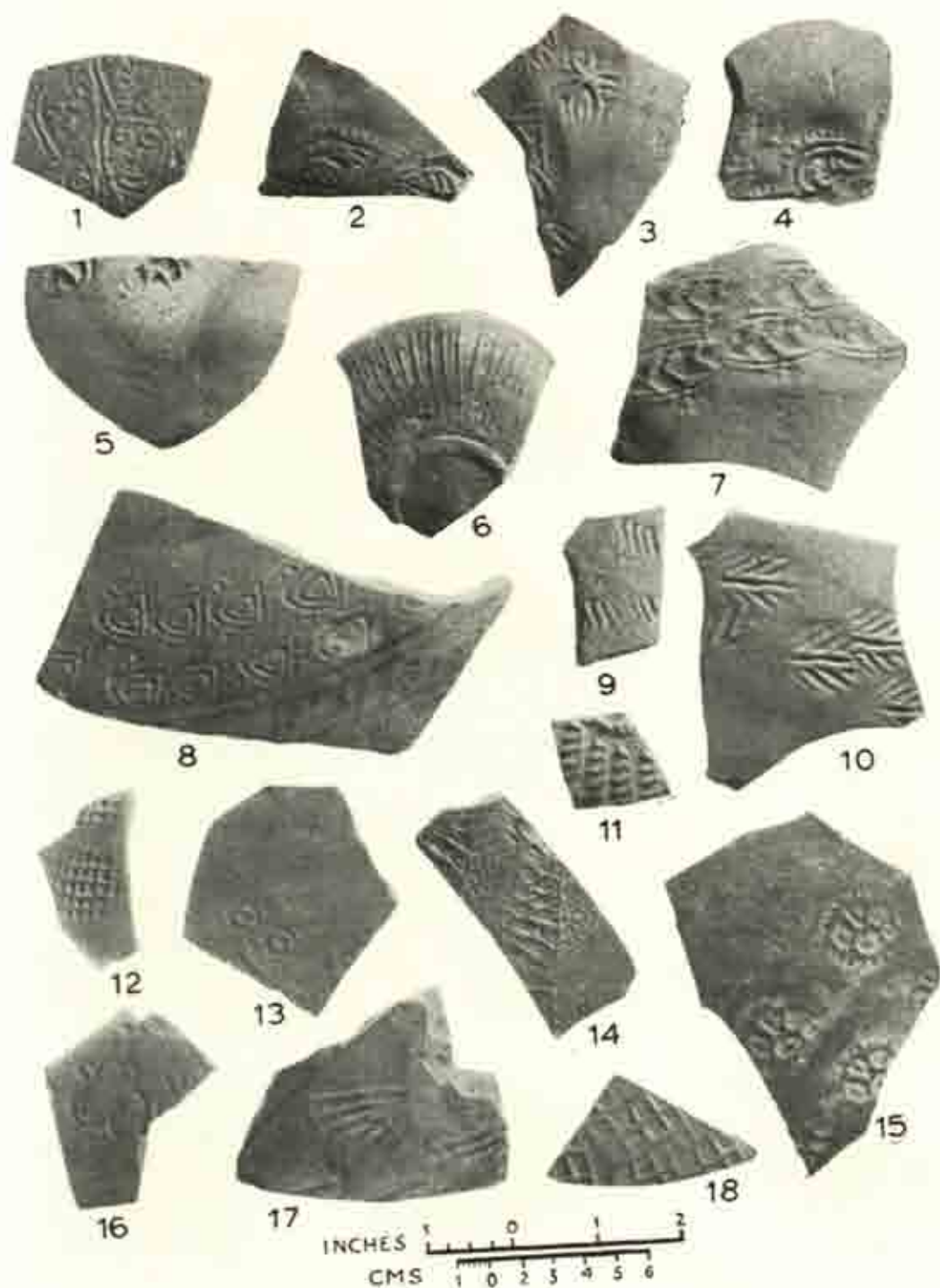
Decorated pottery with impressed design of periods I to II-A.



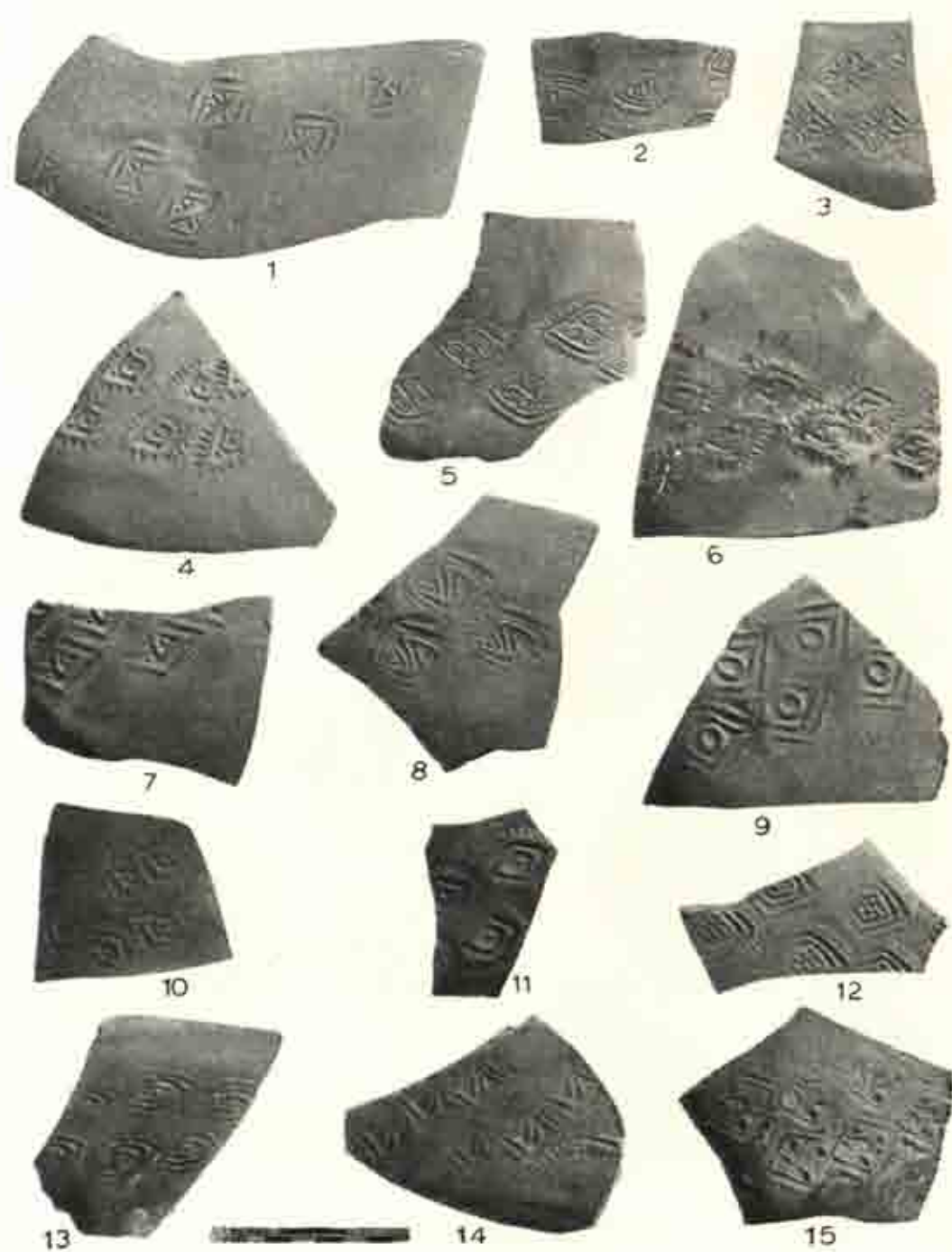
"Tulamba Stamped Ware" of periods II-B to IV.



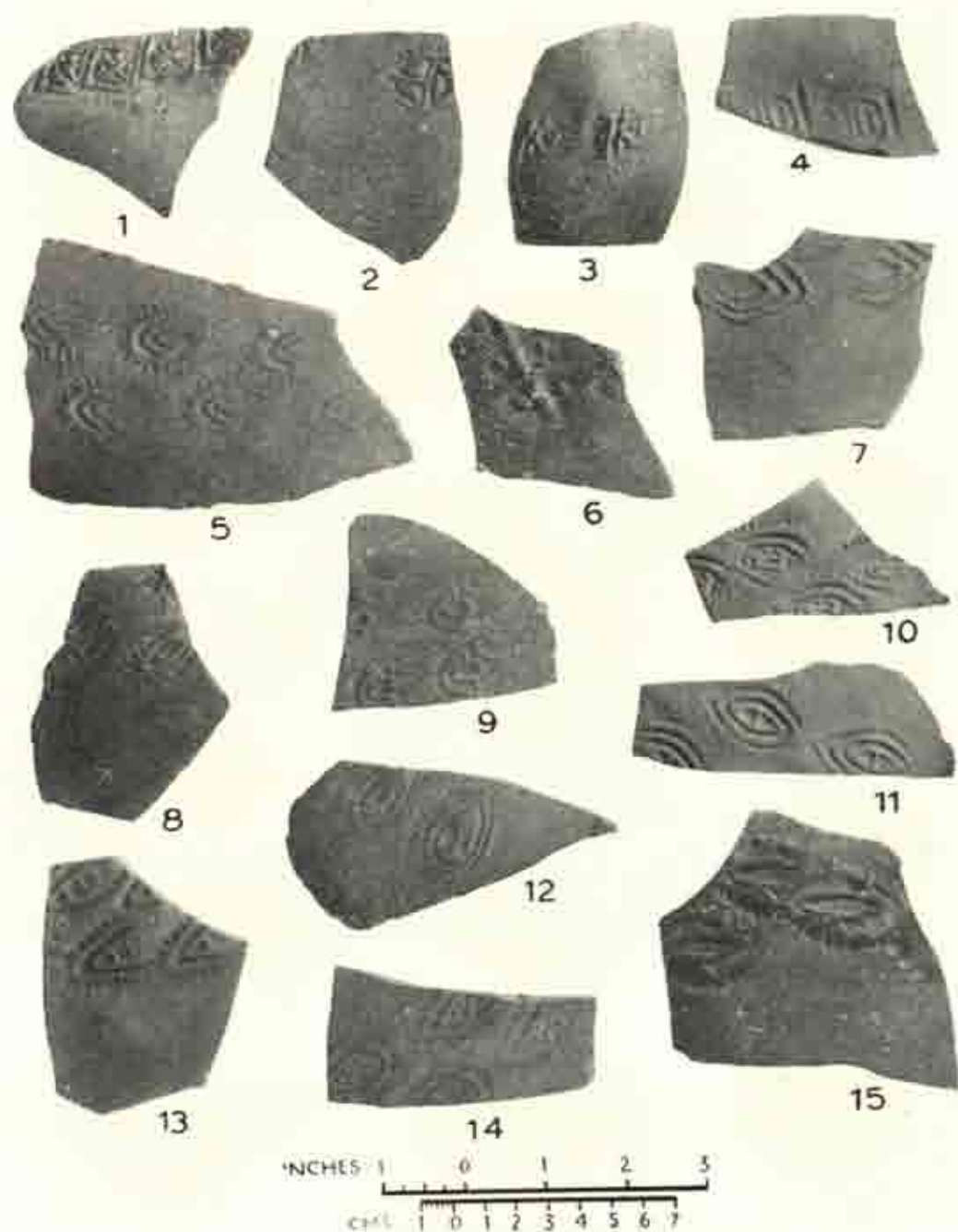
"Tulamba Stamped Ware" of periods IV and V.



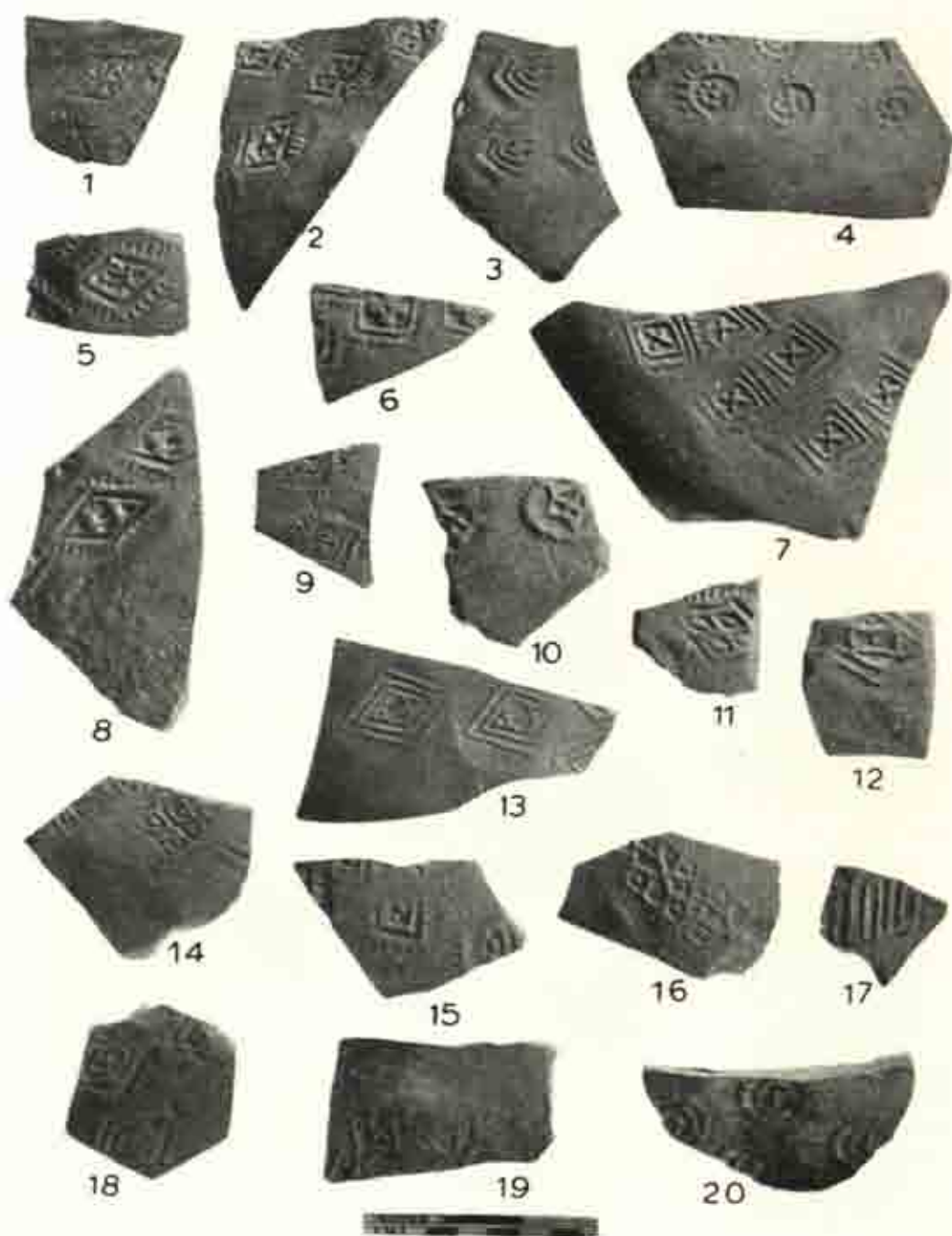
"Tulamba Stamped Ware" of periods V and VA.
 Potsherds with human and animal figurines, Nos. 1, 2, 4 and 5.



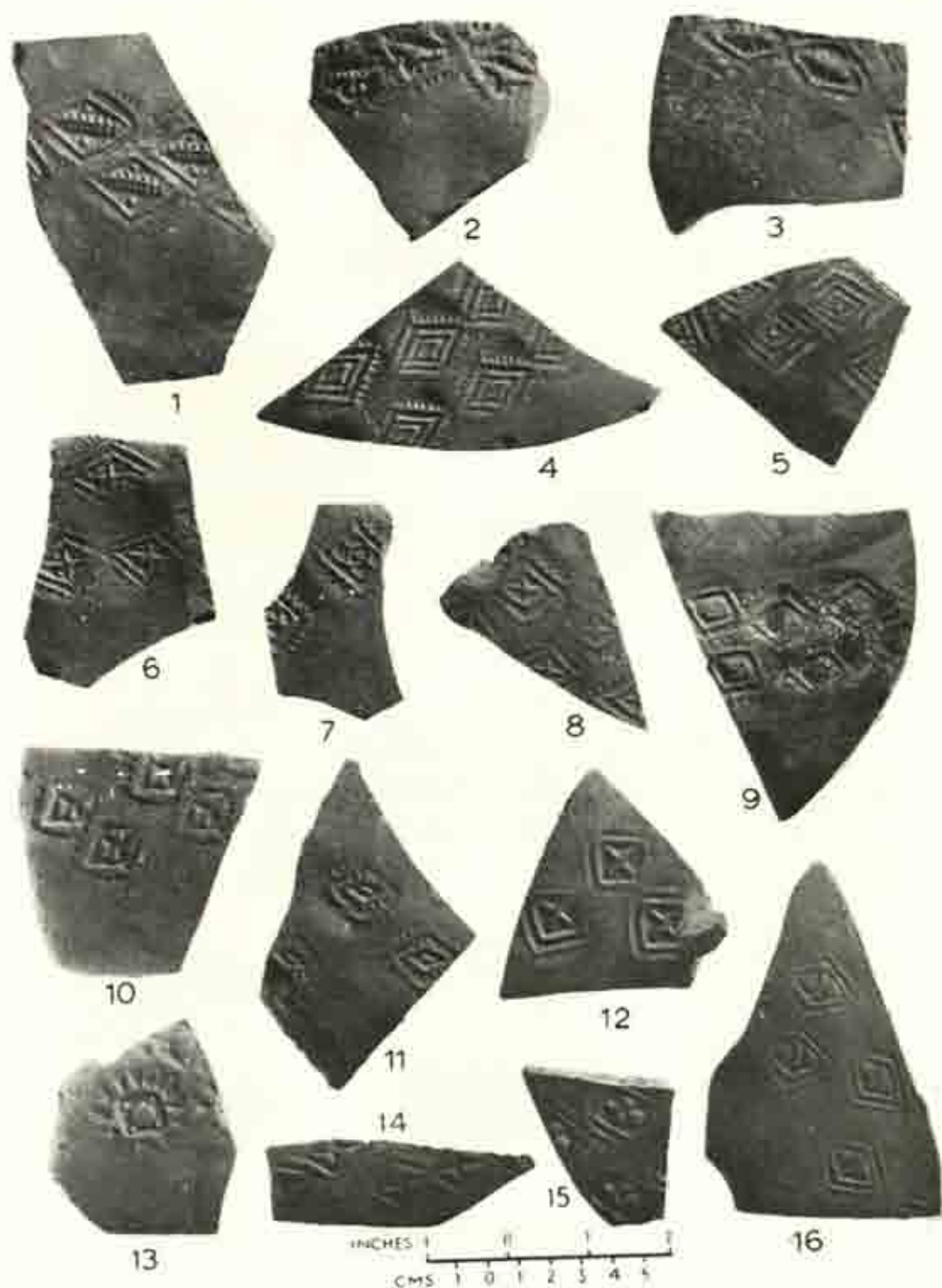
"Tulamba Stamped Ware" of periods V and VA.



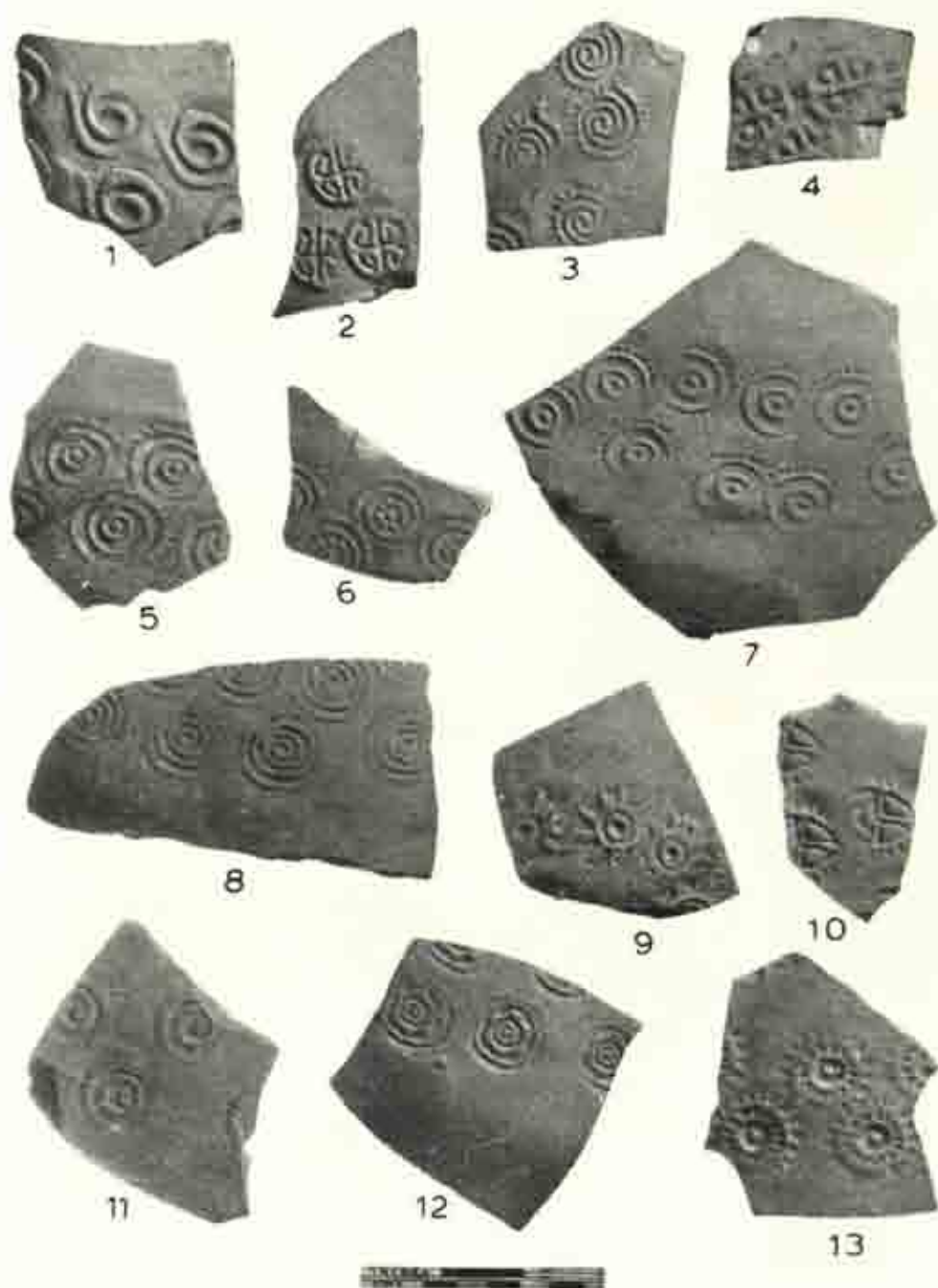
"Tulamba Stamped Ware" of periods V and VA.



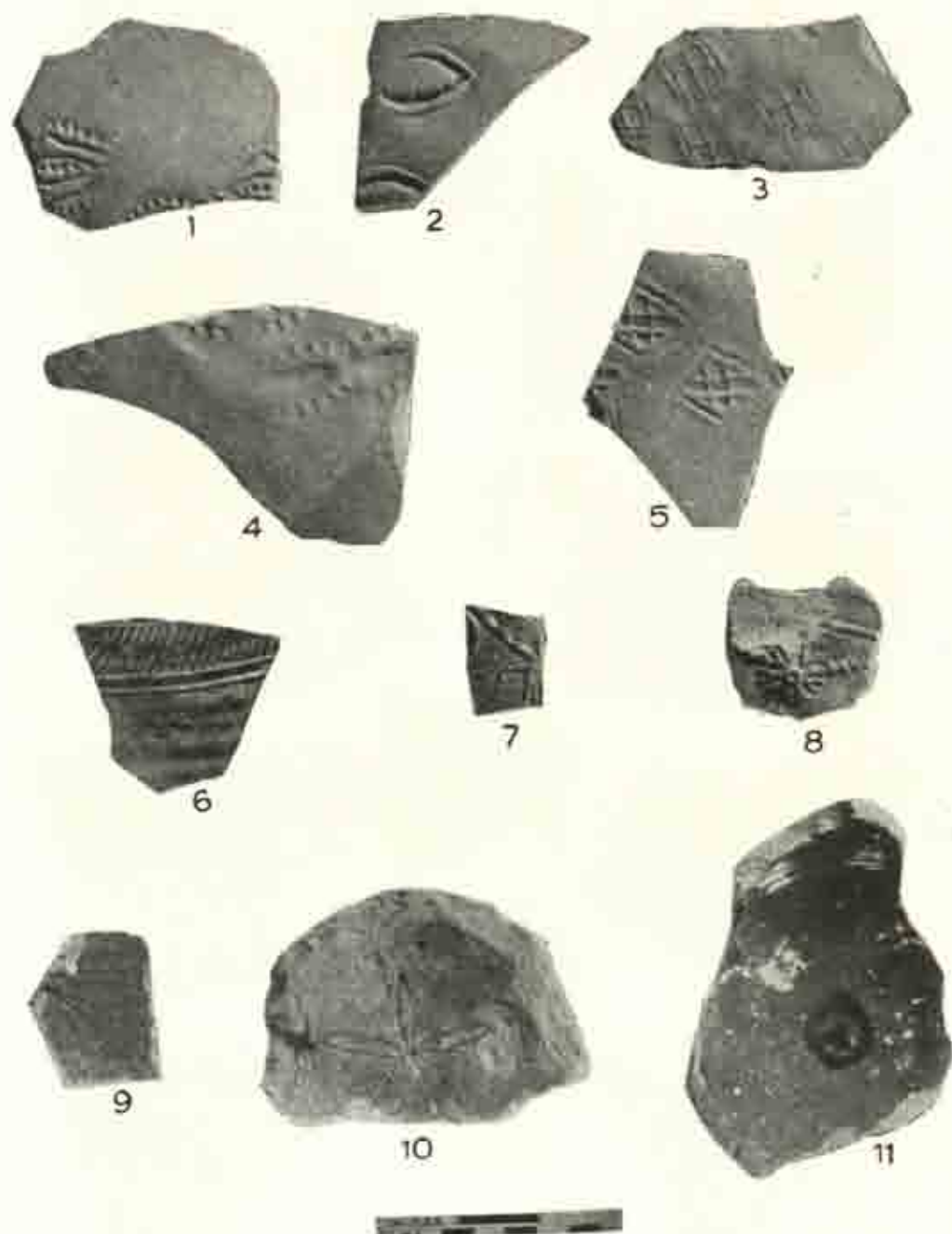
"Tulamba Stamped Ware" of periods V and VA.



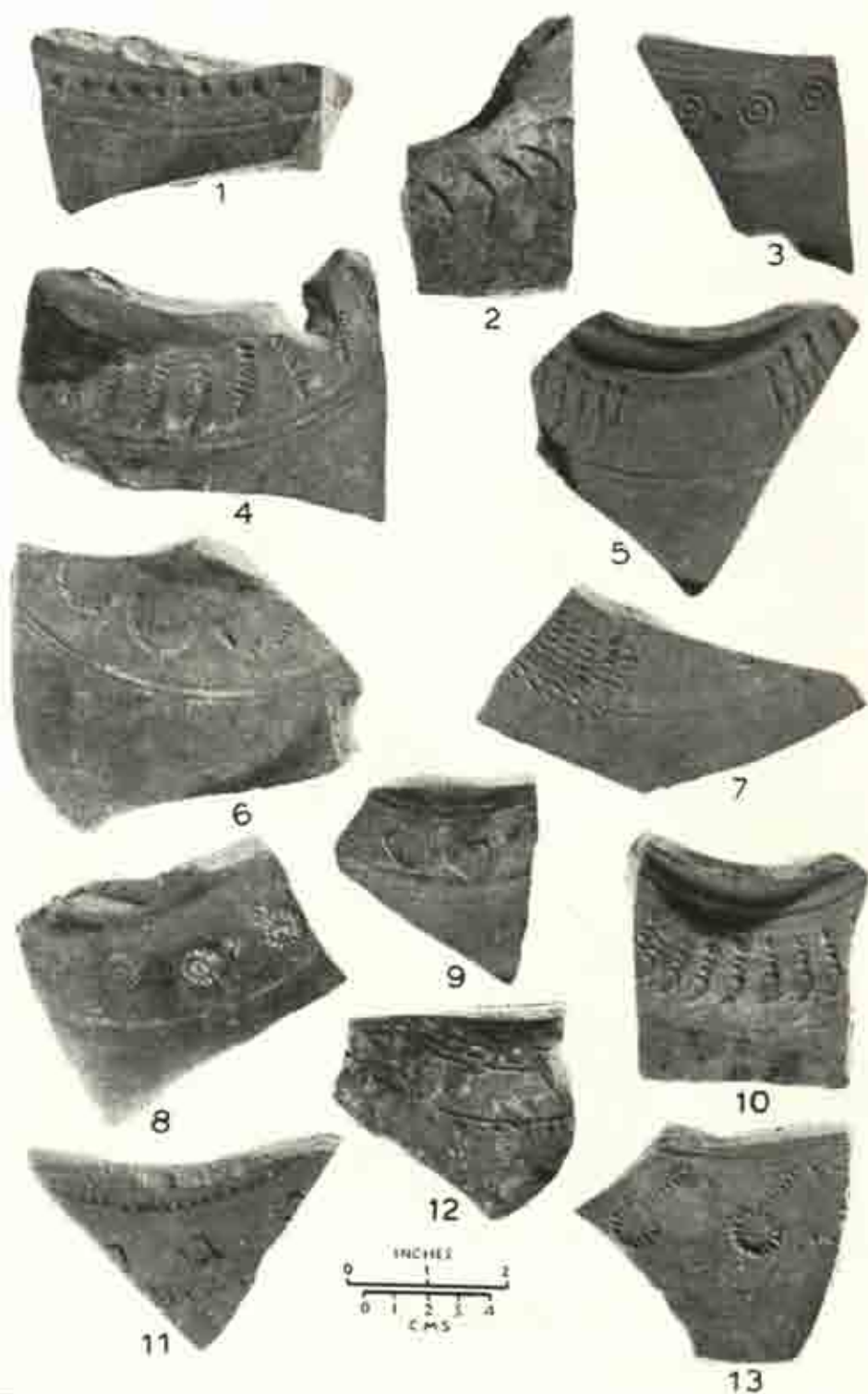
"Tulamba Stamped Ware" of periods IV, V and VA.



"Tulamba Stamped Ware" of periods III to VA.



"Tulamba Stamped Ware" of period VA and other decorated and glazed ware.



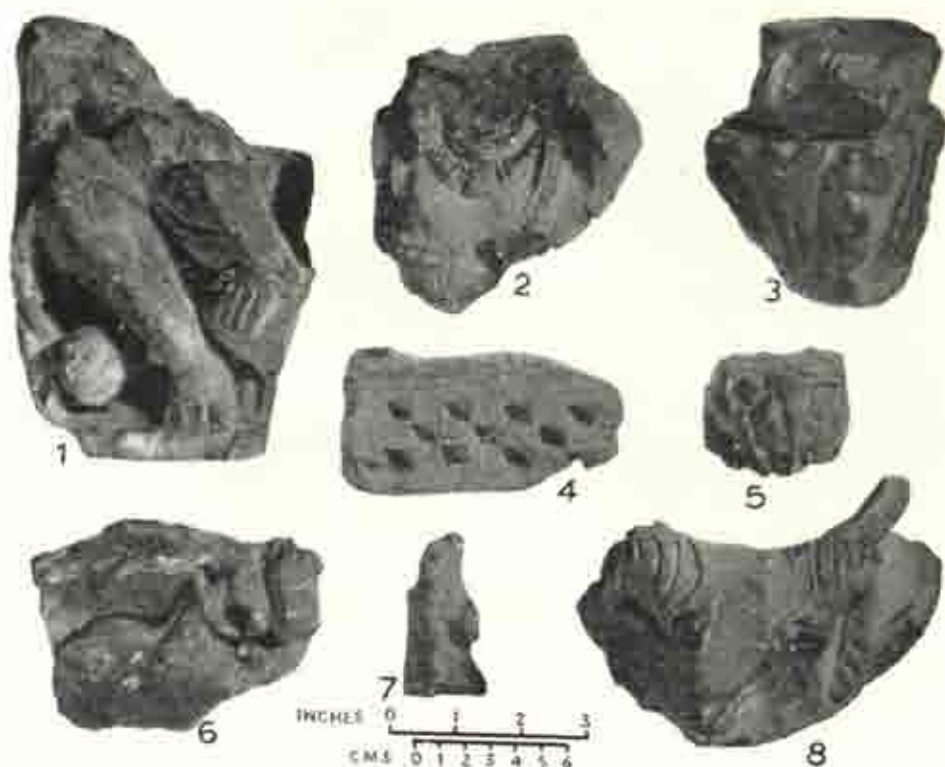
Decorated Pottery with impressed designs of periods IIA and IIB from TLB-III.



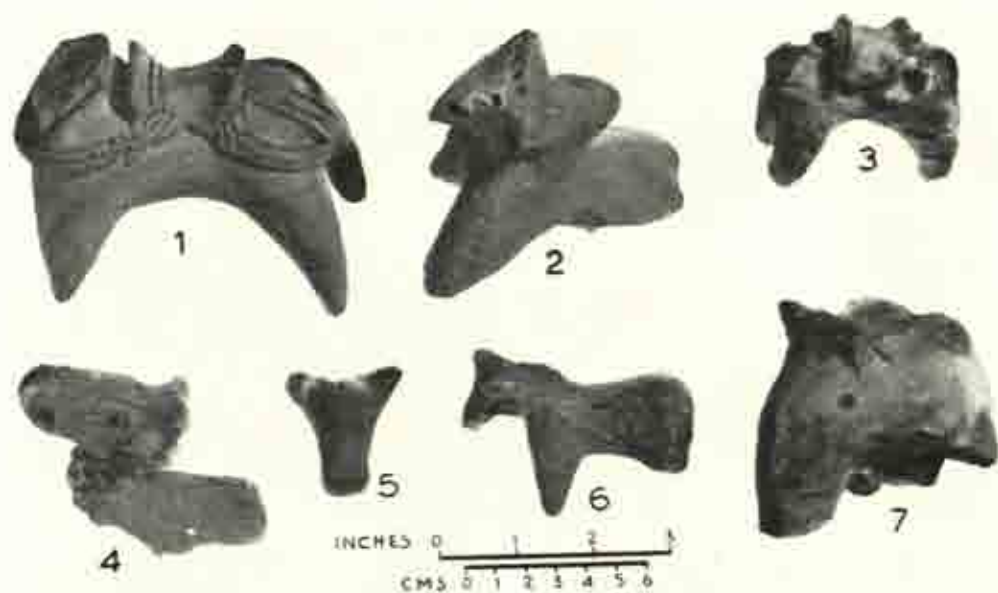
Pottery and terracotta objects.



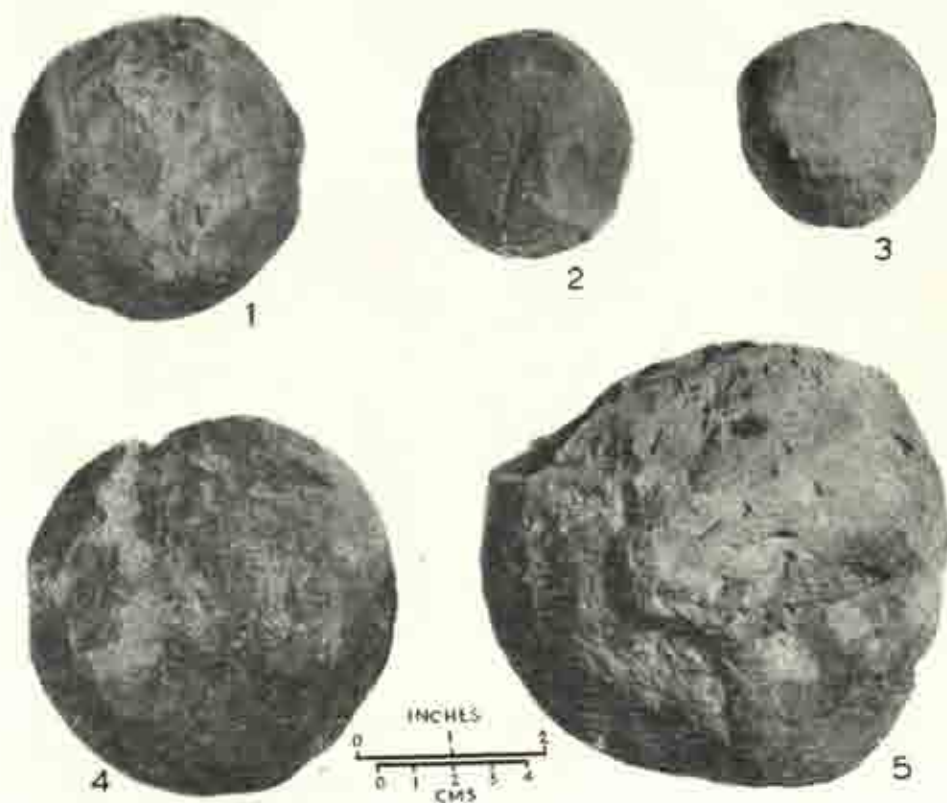
A. Terracotta human figurines and a piece of plaque.



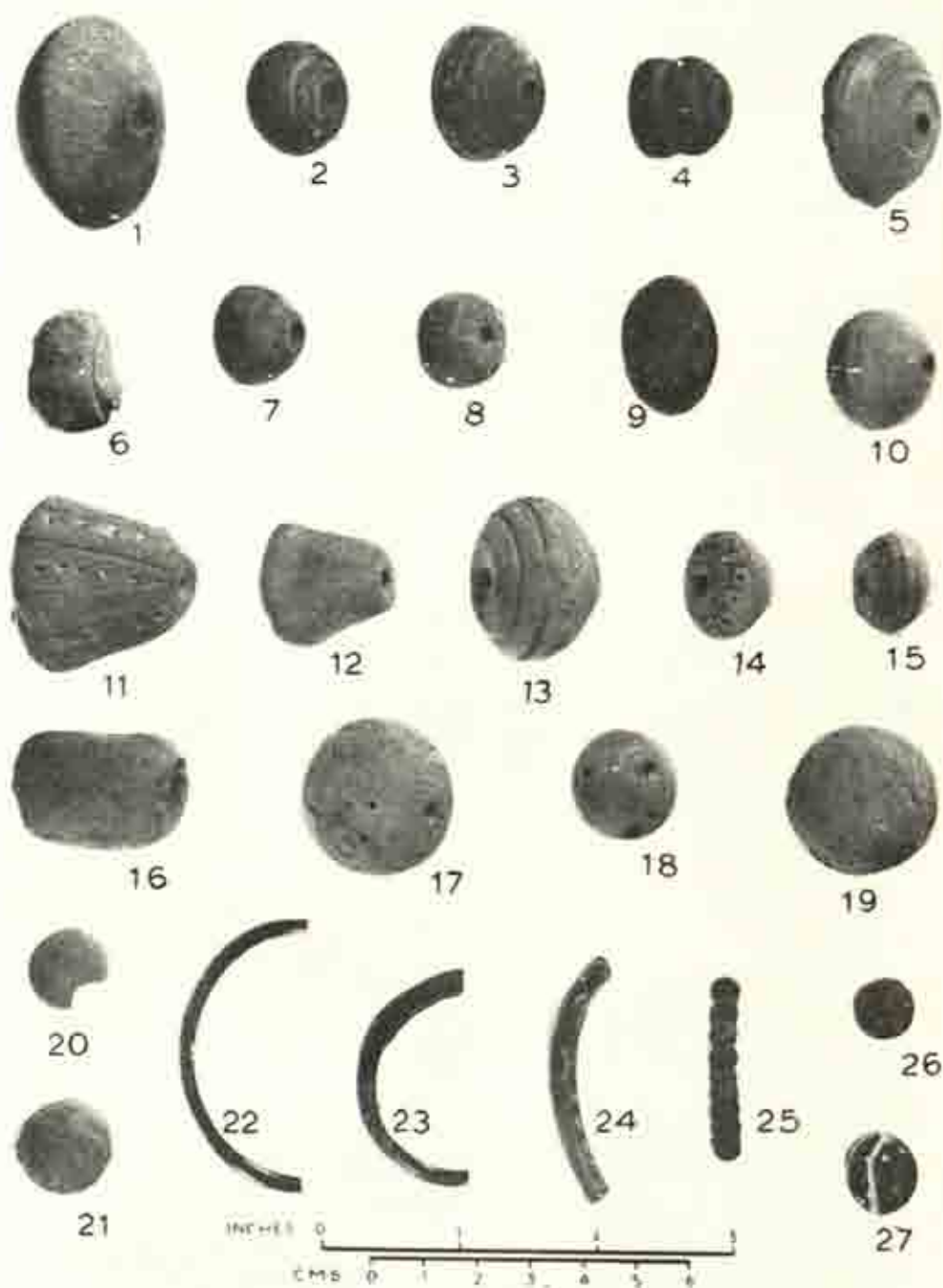
B. Terracotta pieces of plaque and other objects.



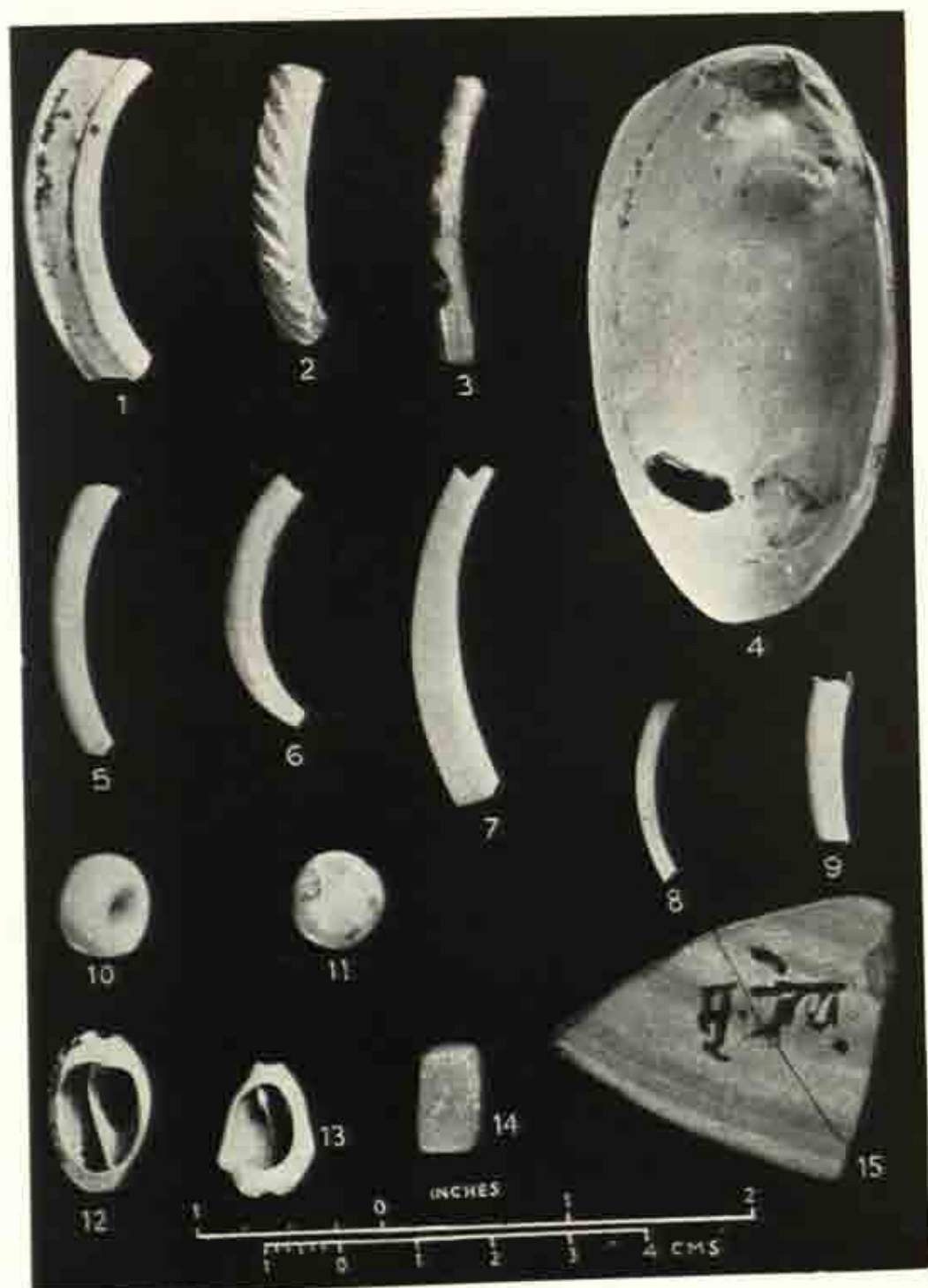
A. Terracotta animal figurines.



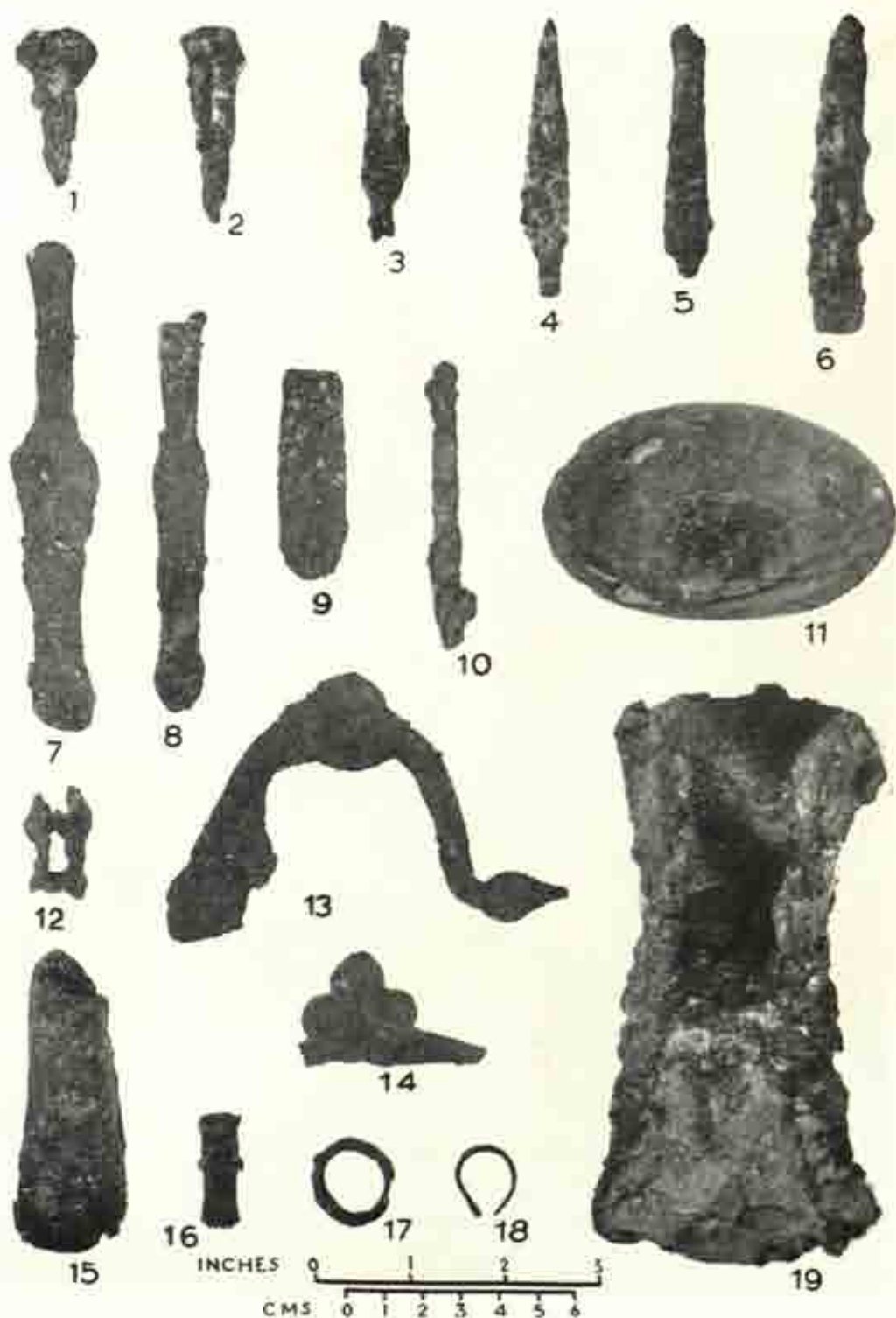
B. Terracotta sling balls from various levels.



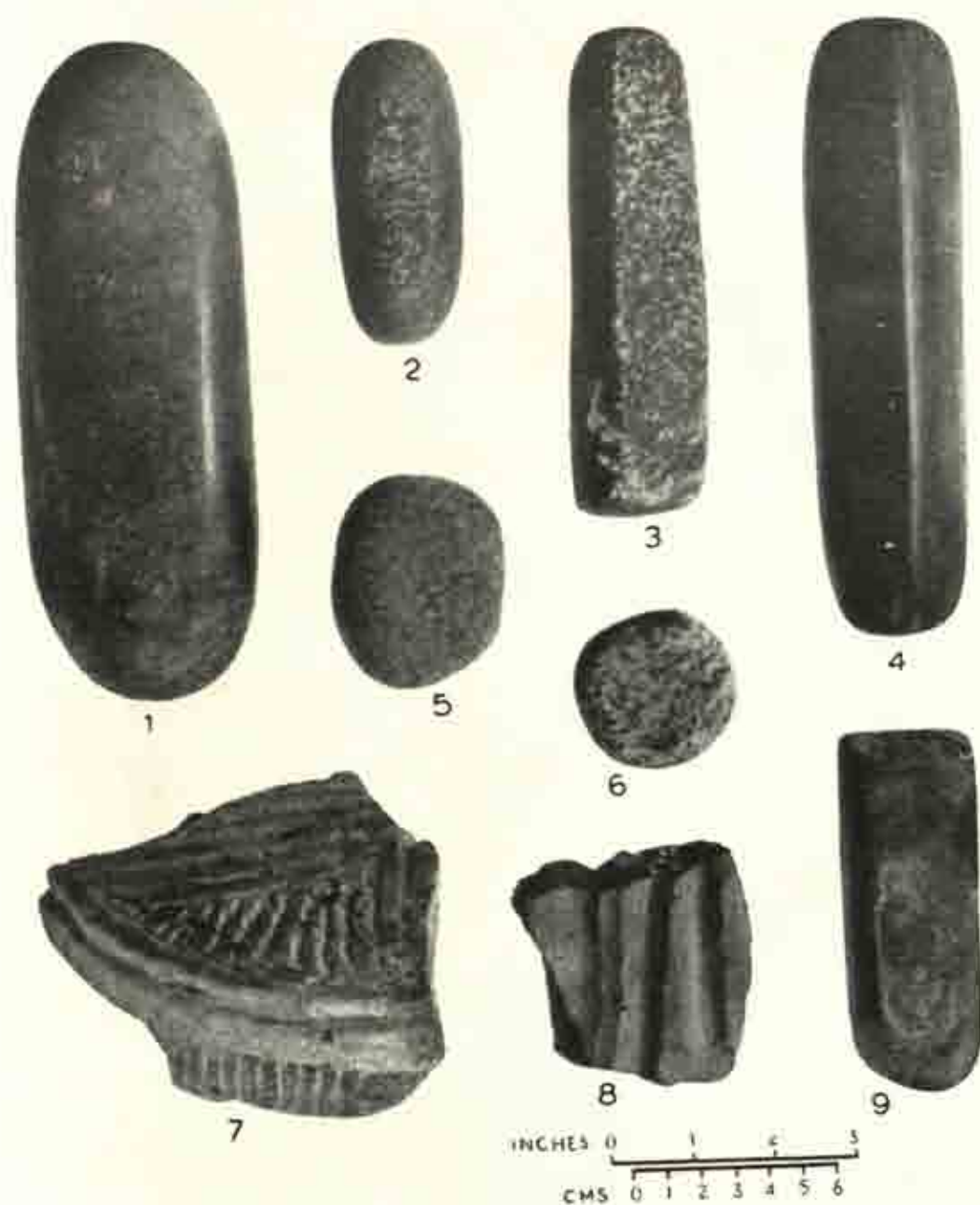
Terracotta beads, balls, semi-precious stone beads, glass and copper bangles.



Shell, glass and faience objects and an inscribed potsherd.



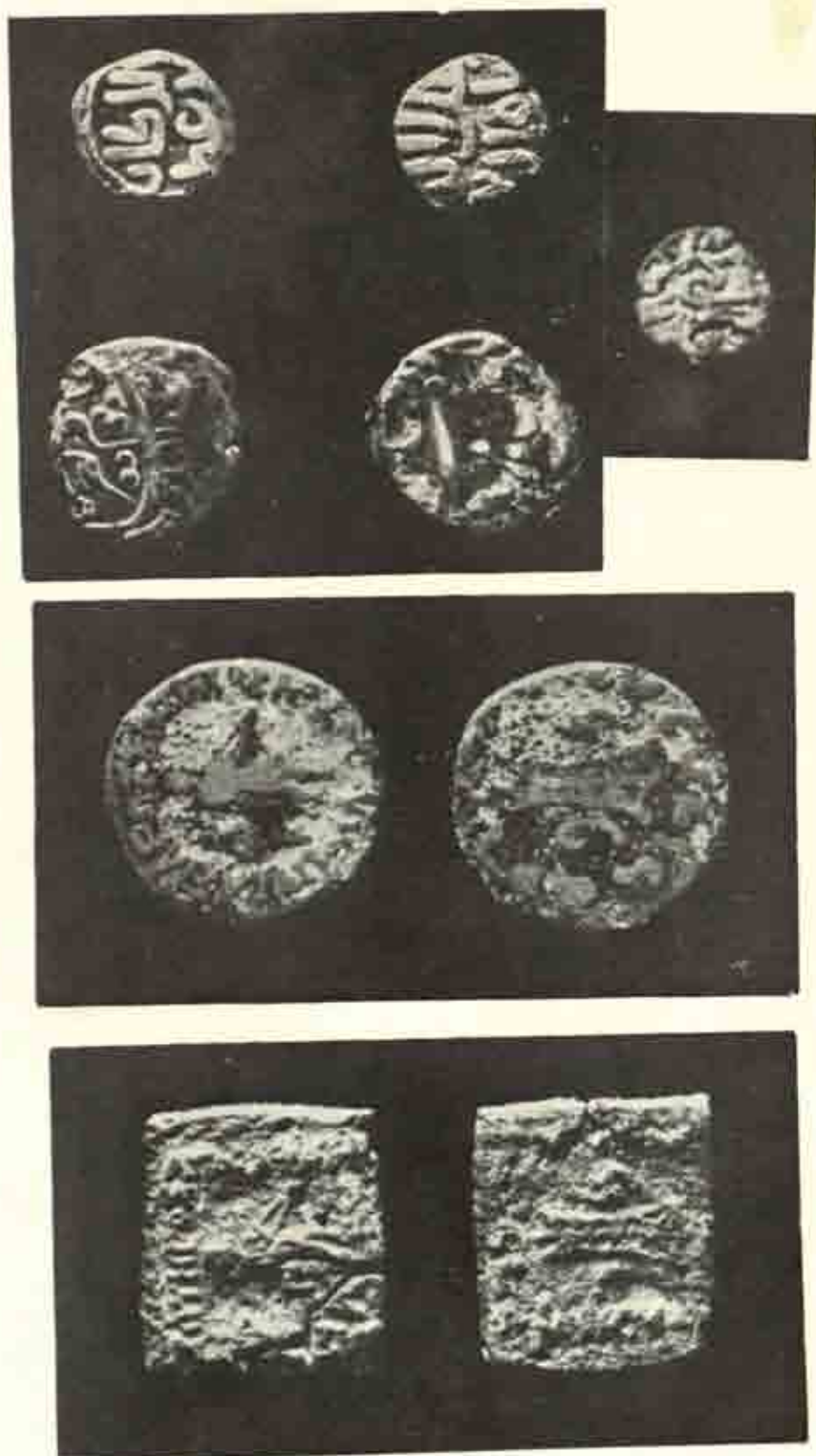
Metal objects from various levels.



Stone objects of different periods:



A necklace of stone and glass beads with a silver pendant.



Coin from Tulamba and other sites.



Panjab from the early 2nd century to the middle of 1st century B.C. That this part of country later on passed into the hands of the Sakas, is supported by the large number of Indo-Scythian coins collected by Alexander Cunningham from Shorkot.²⁵

Such is the state of available information, scanty and imperfect on Tulamba and its surrounding areas which hardly helps to produce a connected history from the beginning of the Christian Era to the Muslim conquest of the lower Panjab, when Multan city and province figure prominently in recorded history. Our excavations, limited both in time and extent have produced some material relics of Brahmanical character in pre-Muslim levels, which in the absence of dateable evidence cannot be placed securely within the known dynastic divisions of Hindu India. It is also not possible to trace the full impact of the constant struggle for power supremacy, the repeated wars and the succession of rulers, with which the history of Multan Province is crowded on the village folk or on the town people, of which Tulamba is an example. The chronological sequence of Tulamba revealed major changes in the occupation, but little change is discernible during the entire length of a particular cultural horizon. A few coins and objects point out the dynastic change but without having any fundamental effect on the cultural pattern.

In this context, to sum up the history of Multan does not seem to be relevant within the scope of this report since all the happenings at Multan or somewhere within the modern or ancient boundaries of this province or 'Mahal' (Sub-Division), cannot obviously be associated with Tulamba. However, some important events in the history of Tulamba may be pointed out.

Muslim rule immediately after the Arab invasion at the beginning of 8th century A.D., seems to have had little influence on the local population. At the beginning of the 11th century A.D., Mahmud of Ghazna as a part of his Indian campaigns, attacked Multan but no change in the basic non-Muslim culture was effected. By the time of Muhammad Ghori's successful attack on Multan in 1175-76 A.D., of whose period two coins of "bull and horsemen type" were recovered from the stratified levels of Tulamba some glazed ware was introduced and other ceramic type, evolved into different forms appeared marking the beginning of the impact of Muslim occupation of lower Panjab. The history of Tulamba

in a subsequent period of more than two centuries, is again missing till Farishta narrated the arrival of Timur at Tulamba in September, 1398 A.D.²⁶ The town is reported to have been plundered by the soldiers of Timur before he marched on to Multan. Again, in 1430 A.D., Amir Sheikh Ali, Governor of Kabul, marched towards Tulamba and an attempt by Imadul Mulk, the Governor of Multan, to surprise Sheikh Ali near Tulamba failed and he was obliged to retire to defend Multan with reinforcements under Fateh Khan.²⁷ Sheikh Ali is reported to have plundered the town and the country around.

The repeated attacks on Tulamba, before the establishment of Mughal rule, indicated that it was a town and fort of some significance, apart from its situation on the way to Multan. The town was gradually abandoned which is believed due to the change in the course of the river, and a new site was selected nearly one and a half mile distant by Shujawal Khan, the son-in-law and Minister of Mahmud Langa of Multan, sometime in the early part of the 16th century A.D.²⁸ The casual references to Tulamba in contemporary accounts of the Mughul period,²⁹ may relate, therefore, to the second town and not the site of our excavations. A re-statement of all the minor events is neither important nor relevant here, but it may be mentioned that the second or third city of Tulamba, during the later periods came to be known as a seat of learning, taking part in the social and cultural activities of the Muslims as did Multan, Uchh and Sialkot.³⁰ By that time, ancient occupation at 'Tulamba Bhir' must have ceased because no relic, belonging to the 17th or 18th century, was found either in the excavated areas or on the surface of the mound.

SUMMARY OF RESULTS

The results of excavations obtained at Tulamba may be summed up as under:—

1. The site may be identified with one of the cities of the Mallois taken not by Alexander himself but by one of his generals, Peithon, in 326 B.C.

²⁶ John Briggs, *History of Rise of the Muhammadan Power in India*, 1908, Vol. 1, PP. 486-87 (Trans.)
²⁷ *Ibid.*, PP. 524-25.

²⁸ Cunningham's assumption, that the new site marked the present town, does not appear to be correct. In fact a large mound, which he did not examine, is still traceable one and half miles north-east of Tulamba Bhir. The modern town marks the third city, which at present encloses a 12-sided fort of 18th century, built by one Sharif Baig, the Naib-e-Nazim of Multan.

²⁹ *Muntakhab-ul-Tawarikh* by Abdul Qadir Badauni, trans. by Elliot and Bowson, 1953, Vol. 11, PP. 35 and 151. Also *Ain-e-Akbari*, trans. by Blochman, 1927, P. 349.

³⁰ S.A. Naqvi, *A Glimpse into the Common Literary Heritage of Pakistan, Iran and Turkey*, 1966, P. 11.

2. The limited area excavated in the wide depression surrounding the high citadel mound revealed no evidence to help establish the existence of a moat, supposed to be existing at the time of Alexander's invasion and on the basis of which Cunningham tried to identify Tulamba with a city as described by Arrian, defended by "art and nature".

3. The burnt-brick fortification around the citadel, partially uncovered, may belong to period III (7th to 12th century A.D.) corresponding to the appearance of a culture marked by "Tulamba Stamped Ware".

4. Contrary to Cunningham's view, there was no evidence of earthen ramparts around the citadel but the mounds contained entirely occupational earth.

5. The exploration revealed a large number of sites within a limited area surveyed along the left bank of the Ravi (including a site of Kot Diji Culture), thus corroborating the accounts of the Greek Writers who recorded a large number of cities conquered by Alexander in the land of the Mallois.

6. The site produced for the first time a cultural sequence of nearly two thousand years in an area of lower Panjab. This will be of help in carrying out further archaeological investigation of historical sites in the heart of West Pakistan.

7. The material relics unearthed at Tulamba indicate, with the exception of a cultural break, little change in the cultural pattern of the inhabitants, despite the changing political conditions during the pre-Mughal period. The change in the culture seems to be gradual, covering a long period of history.

PLAN OF EXCAVATION

With a view to obtaining a complete stratigraphical sequence of the various cultures, an undisturbed area was selected in the north-eastern part of the central high mound, where an area with a 55 feet long trench in the north-south direction and 15 feet wide was excavated down to the natural soil which appeared at the depth of 61 feet. This trench was recorded as TLB-I and its three sub-divisions A, B, and C were maintained during excavation for proper record and control. Otherwise, it formed one continuous trench. In fact, the trench TLB-I was at the second highest point on the mound because the highest point stood like a tower on the

south-eastern corner with steep sides and narrow top, making digging operations too difficult in practice. Thus it is probable we missed relics of the 16th century in the uppermost part of the mound which is nearly 14 feet in height.

In order to examine the "earthen ramparts" around the citadel as reported by Cunningham, a small trench TLB-II, measuring 25 feet long and 10 feet wide was laid on the northern side of the surrounding mound but it revealed no evidence of earthen ramparts. Instead, regular structural remains of mud-bricks were brought to light. Natural soil was not reached in Trench II.

About the middle of the eastern depression, surrounding the high mound and considered to be an ancient moat, a 20 feet square trench TLB-III was laid out and excavated to a total depth of 33½ feet from the present surface till the appearance of sub-soil water stopped further digging. There, below layer (31) and 8½ feet below the surrounding level of cultivable fields, no signs of occupation were visible. By comparing the pottery types recovered from TLB-III with those from the main Trench TLB-I, information concerning the approximate date of the moat in use and of its final abandonment was obtained.

On the southern side of the mound where a mass of burnt-bricks was visible in an eroded section, limited clearance revealed the base of a burnt-brick fortification wall which was partially uncovered upto its foundation. This area was marked as TLB-IV although no regular trench was laid there. A few specimens of pottery from the associated layers gave some information as to the date of the brick fortification.

The work at Tulamba concentrated on deep digging instead of area excavation owing to the disturbed condition of the site. The details of stratigraphy, particularly of the TLB-I and II and the structural remains unearthed in TLB-I, II and IV (fortification) are summed up in the following pages.

CHRONOLOGY

The bulk of material recovered from Tulamba presented difficulties in working out a chronological sequence of the site. Most of it was new to our knowledge and little numismatic or other dateable evidence was available. Moreover, comparative material to help establish a reasonable time-

scale was not available from all the stratified levels of Tulamba. With these limitations and drawbacks, the chronology of the site must be regarded as tentative since it was based on certain assumptions, and a few coins or decorated wares comparable with other sites. Further researches may confirm or alter the suggested dates assigned to the cultural materials of Tulamba but their relative sequence will remain unchanged. The following chronology was based entirely on the material recovered from the main Trench TLB-I.

A) Nine feet above the natural soil, layer (51) yielded a square copper coin of Apollodotus II, C. 175 B.C. The underlying accumulations produced evidence of 5 occupation levels in layers (52), (53), (54), (55) and (56), among which layers (54) and (55) were associated with building remains. Assuming that 5 occupations and 2 Building Levels might have covered at least three or four centuries, the earliest occupation on the site is thought to date back to 5th or 6th century B.C., if not earlier.

The layers above the one containing a coin of Apollodotus revealed one Building Level associated with (50) and (49) which may represent duration of nearly a century. Since the deposits from (57) to (49) were generally ashy and yielded homogenous pottery types, all may be bracketed into one cultural horizon or period, dated between 5th or 6th century B.C. to the end of 2nd century B.C.

B) In the following period, building activity was rapid and a 10 feet thick accumulation contained 6 Building Levels from layer (48) to (42). The decorated pottery from these layers showed parallels with the Scytho-Parthian ware of 1st century B.C., to 1st century A.D., from Taxila³¹ and Shaikhan Dheri.³² Pottery with similar impressed designs has also been reported from Hastinapura, belonging to Period IV and placed within a wide bracket from early 2nd century B.C., to the end of 3rd century A.D.³³ The comparative dates of Taxila, Shaikhan Dheri and Hastinapura fairly equate with that of our period II, from 1st century B.C. to 3rd century A.D., assigned to the material recovered from layers (48) to (42). It may be pointed out that layer (45) which was associated with Building Level 8, yielded a coin of Sotar Megas, C. 100 A.D.

31 Sir John Marshall, *Taxila*, 1951, page 436, Plate 128, No. 249, 2nd Pl. 131, No. 1 and Pl. 128, (cf. Fig. 24).

32 Ahmad Hasan Dani, *Shaikhan Dheri Excavation in Ancient Pakistan*, Vol. 11, 1965-66, page 162 Fig. 36, Nos. 3, 4 (cf. Pl. XIV, No. 1); Fig. 38, No. 7 (cf. Pl. XIV, No. 4) page 165, Fig. 39, No. 2, No. 248 (cf. Fig. 24, No. 11).

33 B.B. Lal, *Excavation at Hastinapura and other Explorations in Ancient India*, Nos. 10 & 11, Pl. XXXII, Nos. 10 & 15 (cf. Pl. XIV, Nos. 7 and 5, respectively).

C) The subsequent deposits yielded pottery impressed with degenerated and variant designs (Fig. 27, Nos. 1 to 25). In it, three layers with one Building Level may represent a century or so. Afterwards, great disturbance was encountered, coinciding with a cultural change, marked by different types of ceramics.

D) The pottery recovered from layers (23) to (35A) indicated one cultural horizon and, therefore, may be regarded as representing a period. The most outstanding feature of this period was the emergence of "Tulamba Stamped Ware", (below, page 60) with a bewildering variety of over 200 designs. A few designs showed parallels with those from Stratum I of Ahichachhatra,³⁴ belonging to A.D. 850 to 1100. Fragments of terracotta plaques of Building Level 12, having a painted mud floor (below, page 26) suggested a Brahmanical occupation. Among the two coins of Mohammad Ghori, one was found from layer (23) and thus suggested the upper limit of this horizon, i.e., 12th century A.D., (see below, page 112). It may be pointed out that layers (25) and (21) also revealed few pieces of sgraffiato glazed ware which is restricted to the 12th-13th century A.D. levels at Banbhore.³⁵ Layer (23) also produced a piece of Chinese white porcelain of a contemporary period.³⁶ It is, therefore, assumed that the cultural phase represented by layers (35A) to (23) belonged to 8th century to 12th century A.D.

E) The last level producing another piece of sgraffiato ware was layer (21) which also revealed a piece of opaque glaze, which on comparative grounds, may be placed in the 13th century A.D. or later. To this evidence may be added a copper coin of Ala-ud-din Muhammad Shah (A.D. 1295-1315) found from the surface (below, page 112) which appears to have relevance in this context and may perhaps be associated with another period, represented by the later levels up to layer (17).

F) Among the last occupational deposits surviving at the site of excavation, a rapid but haphazard building activity is marked from layers (6) to (1) with re-used materials. Crudely manufactured glazed ware with incised designs under the glaze (Fig. 34, Nos. 4 and 9) appeared. It all appears to mark poor resources and diminishing occupation of the site, perhaps coinciding with the shifting of the population to another town,

34 A. Ghosh and K.C. Panigrahi, *The Pottery of Ahichachhatra*, in *Ancient India*, No. 1, P. 54, Fig. 9, No. 24 [cf. Pl. XXII, No. 1. It is of period VA but started from layer (38)].

35 Dr. F.A. Khan, *Banbhore*, a Preliminary Report, 1963, page 34.

36 Ibid., page 35.

founded by Shujawal Khan in the early 16th century A.D., but occupation may have lingered on until the close of that century.

It must again be pointed out that the dates assigned to the different levels of TLB-I are purely provisional as the evidence of a few coins and comparable designs on some decorated ware from widely separated sites is not wholly reliable. However, according to the tentative chronology the following dates are assigned to the various periods:—

Period I	5th-6th century B.C. to the end of 2nd century B.C.
Period II	1st century B.C. to the 3rd century A.D.
Period IIA	4th-5th century A.D.
Period IIB	6th-7th century A.D.
Period III	8th to 12th century A.D.
Period IV	13th to 14th century A.D.
Period V	15th-16th century A.D.
Period VA	16th century A.D. or later.

STRATIGRAPHY AND STRUCTURAL REMAINS

In the small areas excavated at four places, no complete layout of the structures was expected, but, even the partial plan of the building remains and associated evidence unearthed, provided information on the total number of Building Levels, the character of the masonry and the building material employed in different cultural horizons. However, a full stratigraphic sequence was revealed in two principal trenches, viz., TLB-I and III, presenting an interesting story of varied accumulations in which changes in the character of cultural deposits coincided with changes of occupation.

THE MAIN TRENCH TLB-I

Utilising a small but undisturbed mound at the northern end of the almost flat area of the central high mound, diggings were started in a restricted area and then extended southwards, making the trench 55 feet long. In all, 57 layers were exposed with 25 major Building Levels down to the natural soil at 61 feet (Fig. 3, Pls. VI and VII). Starting from below, the story of successive occupations is as follows:—

Above the natural soil of brownish colour, a thin layer (57), composed of loose greenish soil, suggested that it was either water-affected

or belonged to a rubbish heap because the few potsherds found in it had lost their original look due to a blackish crust covering them. Layer (56) with its maximum thickness of $1\frac{1}{2}$ feet revealed many irregular ashy patches mixed with charcoal pieces and reddened earth. A few burnt-brick pieces were also present. The contents and composition of this layer suggested an occupation level in which burnt-brick might have been used, but considering the subsequent Building Levels of sun-dried brick only, the use of burnt-brick at this level seems to be of a restricted nature.

BUILDING LEVEL 1

Near the western section, an eight feet wide and 5-coursed structure of mud-brick was exposed which had no regular edge on the eastern side. Instead, a mass of fallen bricks was encountered which extended right up to the opposite section, 15 feet away. The structure appeared to have decayed badly. It was associated with layer (55) which had ashy streaks in its loose brownish earth.

BUILDING LEVEL 2

A seven-coursed structure of mud-brick appeared in layer (54) which, like the underlying layer, contained ashy loose earth mixed with charcoal pieces and numerous potsherds. In the same layer was recorded a compact mass of brownish earth in the north-eastern corner which looked like a decomposed heap of mud-bricks.

Although no regular structure appeared in layer (53), its gradual deposition with ashy soil mixed with some mud-bricks indicated the existence of an occupation level.

BUILDING LEVEL 3

Bordered by black ashy lines above and below, layer (52) gave out hard earth, at places loose and greenish in colour and associated with a mud-brick structure near the eastern section. A mass of brown earth in the north-eastern corner suggested the presence of something of mud probably a pisa structure at that level. Some burnt-brickbats were also recorded in (52). Layer (51) was accumulated against the structure of mud brick mentioned above, and a concentration of fallen mud-brick. It may, therefore, represent the last phase of the building level 3, to which both

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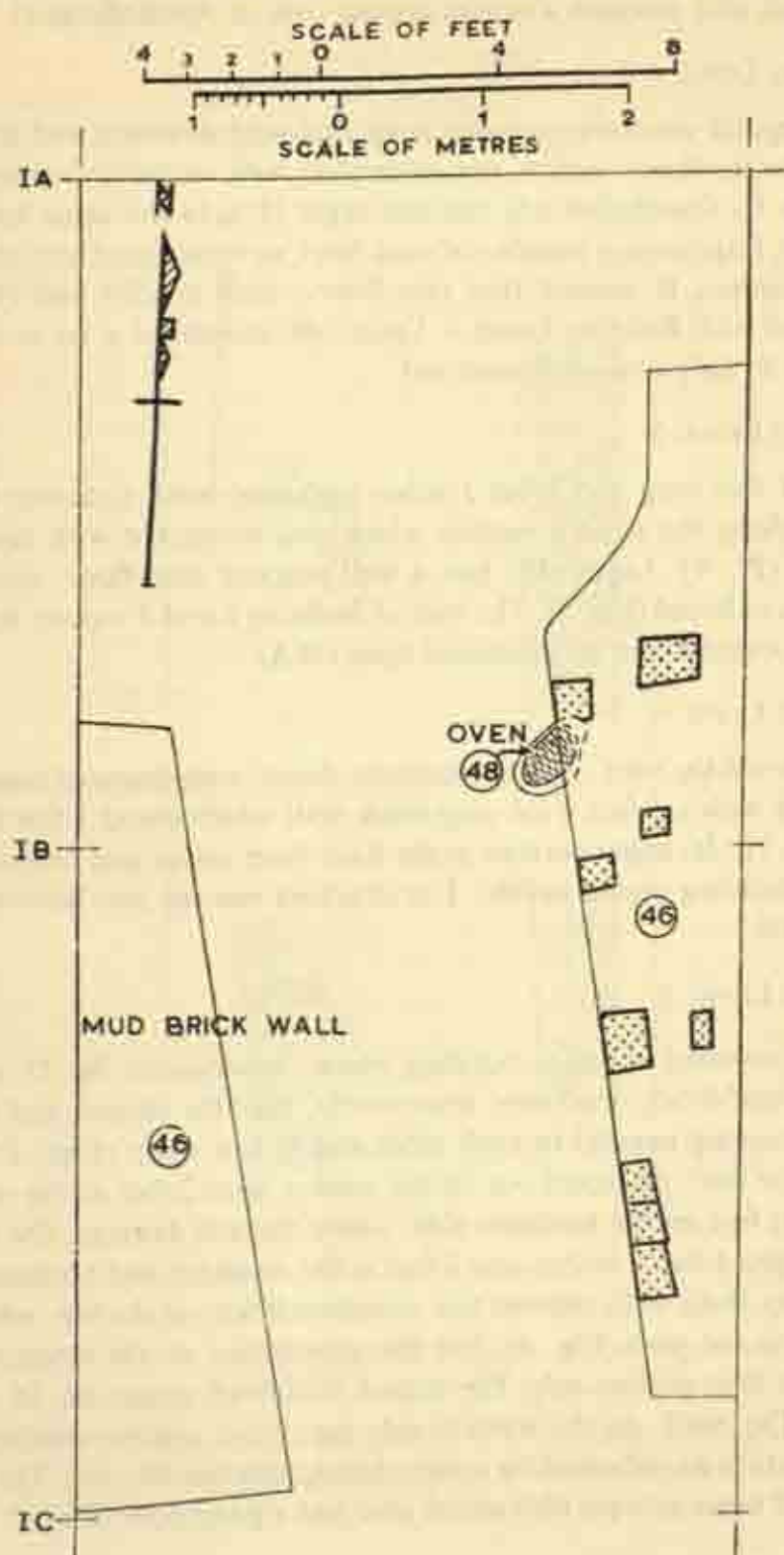


FIG. 4. TLB-1, Structural remains of Building Level 7 and an Oven on the floor of layer (48) belonging to Building Level 5.

the layers (52) and (51) belong. Some burnt-brick-bats were noticed in layer (51) which also revealed a square copper coin of Apollodotus II.

BUILDING LEVEL 4

A regular structure, running in an east-west direction and projecting out of the northern section, was unearthed with its associated layers (50) and (49). Its foundation was cut into layer (51). In the same horizon of layer (50), fragmentary remains of mud-brick were recorded near the south-eastern corner. It seemed that two floors, each in (50) and (49) were associated with Building Level 4. Layer (49) contained a lot of charcoal pieces in its ashy-coloured loose soil.

BUILDING LEVEL 5

A 21 feet long and 5 feet 3 inches high mud-brick structure was unearthed along the eastern section which was associated with layers (48) and (47) (Pl. V). Layer (48) had a well marked mud-floor, over which an oven was found (Fig. 4). The wall of Building Level 5 was cut into layer (49) and sealed by an occupational layer (46A).

BUILDING LEVEL 6

Layer (46A), with its ashy contents mixed with charcoal pieces, was associated with a 3 feet wide mud-brick wall which stood 3 feet 8 inches high (Fig. 3). Its upper portion might have been raised and reused during the next building period in (46). The structure was cut into layer (47) and part of (48).

BUILDING LEVEL 7

This revealed a major building phase, represented by 23 and 17½ feet long mud-brick structures, respectively, near the eastern and western sections running parallel to each other and 8½ feet apart (Figs. 3 and 4). That on the east, projected out of the section upto 2 feet at the southern end and 4½ feet on the northern side, where there is damage, the western wall emerged 4 feet 9 inches and 2 feet at the southern and northern ends, respectively. Both walls showed few complete bricks at the top, which are indicated in the plan (Fig. 4), but the dimensions of the structures are marked by their outline only. The largest mud-brick measured 16×12×2½ inches. The wall on the western side was lying against another mud-brick structure as indicated by a clear break between the two. The Building Level 7 came in layer (46) which also had a good floor of mud.

EXCAVATIONS AT TULAMBA

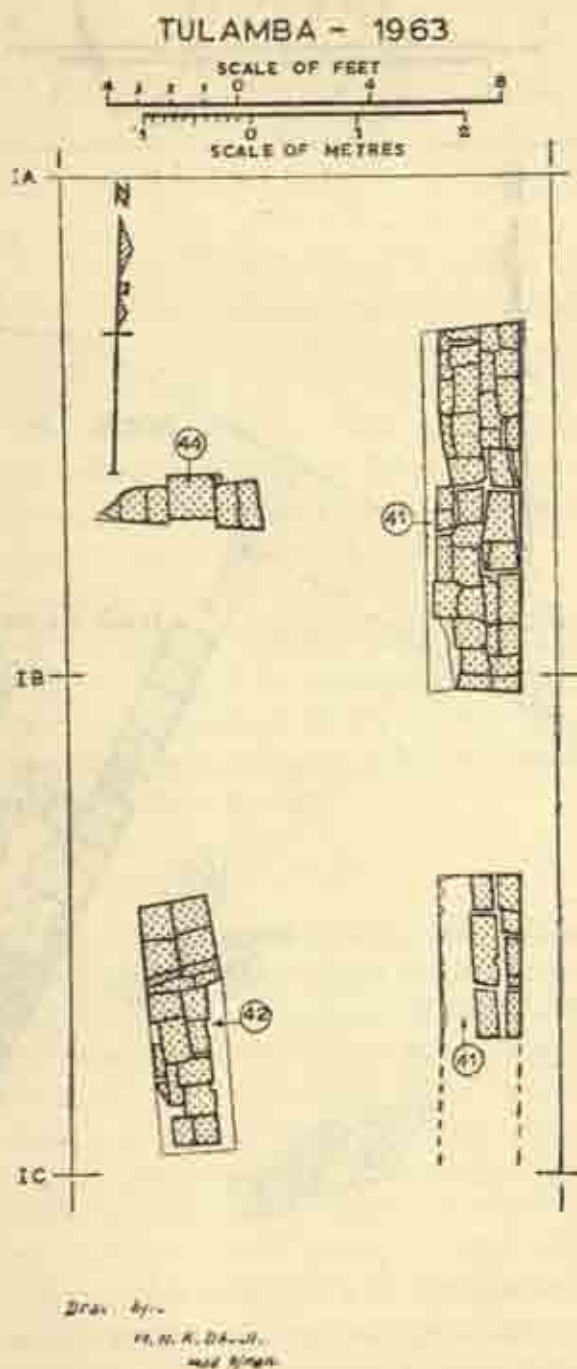


FIG. 5. TLB-I, Structures of Building Level 9 in layer (44); Building Level 10 in layer (42) and Building Level 11 in layer (41).

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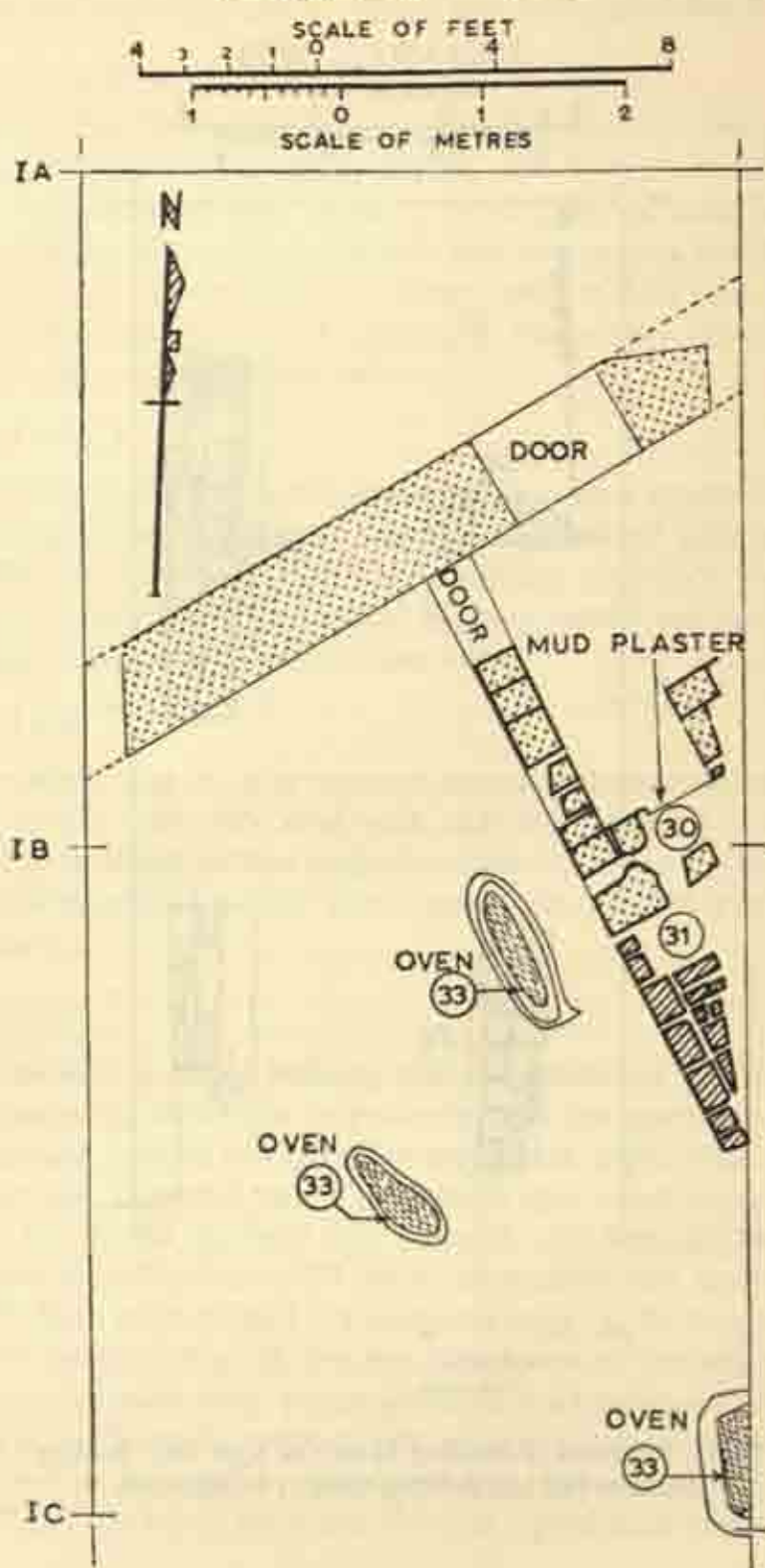


FIG. 6. TLB-1, Ovens on the floor in layer (33) of Building Level 12 and structures in layers (30) and (31) of Building Level 13.

BUILDING LEVEL 8

Separated by an ashy loose deposit of layer (45A) which sealed the mud brick structures of Building Level 7, the layer above 45 contained many charcoal pieces in the ashy loose deposit which marked a floor level, associated with a fragmentary structure of mud-bricks. A coin of Sotar Megas was recovered from layer (45) (below, page 111).

BUILDING LEVEL 9

The loose ashy soil of layer (44) mixed with fallen mud-bricks and brownish earth with its bottom marked by a regular streak of ash, represented an occupation level. It was associated with a mud brick structure on the northern and eastern sides of the trench and a small structure (or Platform) on its floor in 1A (Fig. 5). The upper layer (43) with its ashy contents was also assigned to this Building Level.

BUILDING LEVEL 10

Another phase of building activity was reflected by the presence of a fragmentary wall in 1B (Fig. 5), measuring $7\frac{1}{2}$ feet long and $2\frac{1}{2}$ feet wide and surviving to the height of nearly a foot. The average size of mud-brick employed was 14×12 inches. It was associated with layer (42), being composed of loose ashy soil.

BUILDING LEVEL 11

A 21 feet long and 3 feet wide mud brick wall appeared in layer (41). Being 14 inches away from the eastern section it ran parallel to it in a north-south direction (Fig. 5). Though damaged in the middle and at the southern end, yet it stood 18 inches high. The average size of the mud bricks employed was $18 \times 10 \times 2\frac{1}{2}$ inches. The associated layer (41), gave out black ashy soil mixed with numerous bone-fragments and charcoal pieces. Layer (40) resembled (41) in its contents but sealed the structure of (41).

Above layer (40), a great disturbance in stratigraphy was marked by a large pit with several fillings of loose and hard earth which went right down to the top of layer (47) in the south western corner of the trench (Fig. 3). The disturbance was sealed by a regular layer (38) which marked a positive change in the ceramic types and to some extent, in the building material. Along with the mud brick, burnt-brick also came into use. The

content of the deposits also changed from generally ashy type to sandy loose soil upto layer (36). The deposits in the pit were cleared separately and marked as (39) with sub-divisions from (a) to (c).

The layer (38) revealed a loose and ashy coloured soil in which charcoal pieces were numerous. A number of burnt-brick-bats were also noticed there. The formation of (38) suggested an occupational level. The upper layers (37) and (38) contained horizontally laid sandy and muddy streaks as if deposited by rain. A pile of wedge-shaped burnt-brick was recorded in (37), indicating some sort of building activity at that level. Layer (36) yielded many potsherds and burnt-brick-bats from its ashy loose soil but no structural remains appeared within the excavated area.

Layers (38) to (36) marked a transitional period in which the stamped pottery, christened "Tulamba Stamped Ware" (page 60), emerged in small numbers but occurred in large numbers from layers (35) to (17). Layer (35) marked a definite change in the culture because it was at that stage that the "Tulamba Stamped Ware" began to appear profusely. Moreover, that deposit containing loose brown earth, revealed 435 terracotta sling balls of medium size (Pl. XXVII-B, Nos. 1 and 2). The associated structure did not appear but a 5½ feet high and 4 feet wide mud-brick wall of the later period was found to be sunk through (35). The floor level was indicated by a thin ashy streak at the bottom of (35).

BUILDING LEVEL 12

This was a major Building Level marked by a high wall running towards the south-west across IA and consisting of 35 courses of mud-bricks. It was associated with three definite floors in layers (34), (33) and (32). Originally it must have stood much higher than the stage indicated by a course of burnt-brick above.

The floor associated with the Building Level 12 was made of brick concrete in (34), spreading over IA and IB except at the south-east corner. The second floor was recorded at the bottom of a hard brownish deposit due to the presence of mud-bricks of layer (33). Three elongated fire places (Fig. 7) indicated the floor level of (33). The third floor in (32) was the most extensive and was well preserved. It was made of rammed earth, 1 to 2½ inches thick. The surface of the floor was smooth as if plastered carefully with mud. On it, an elaborate design was painted in white, consisting of buds, circles and wavy lines between a double-

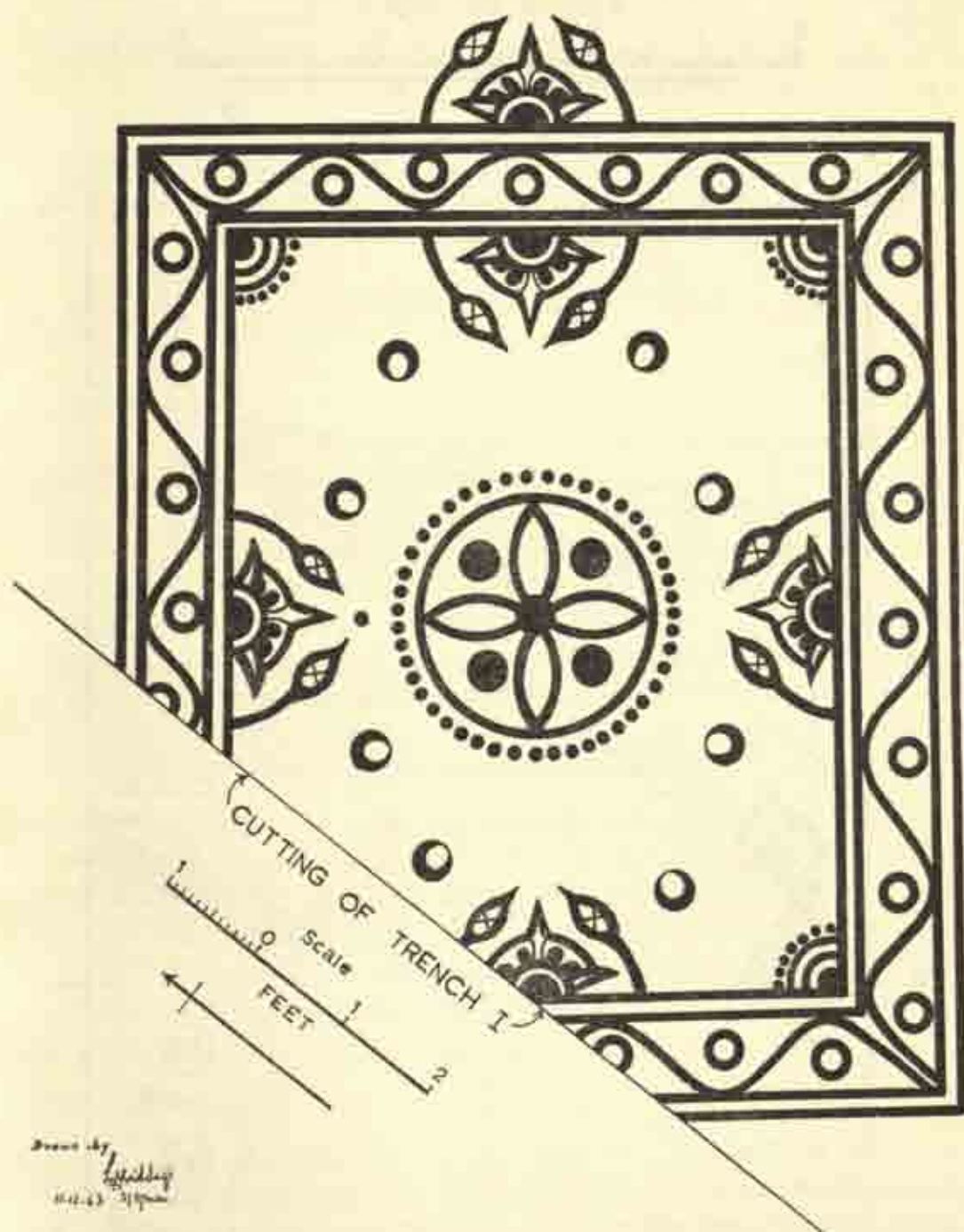


FIG. 7. TLB-I, Painted design on the mud floor of layer (32) of Building Level 12.

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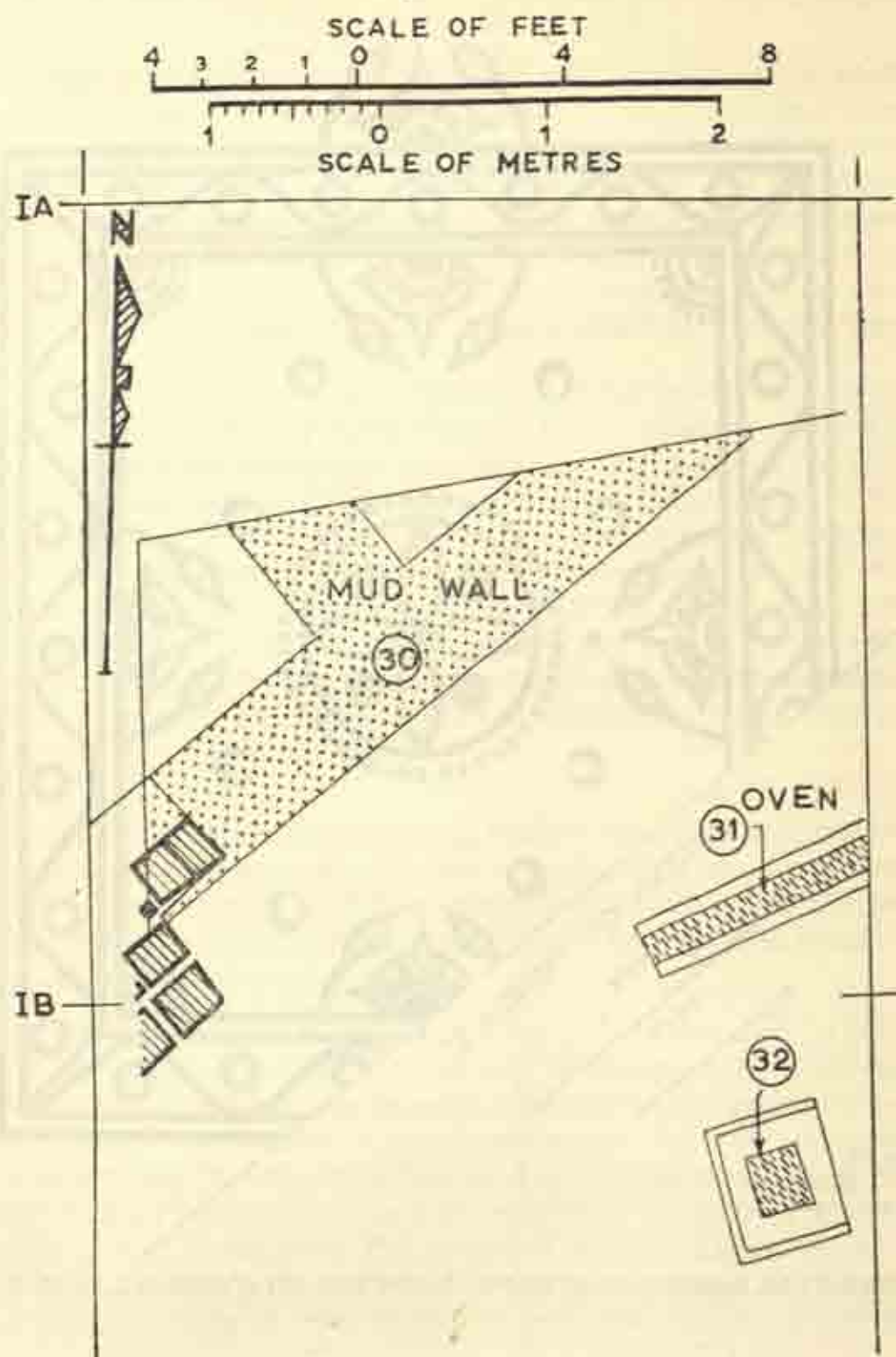


FIG. 8. TLB-I, Ovens and Structure of Building Level 13.

lined border (Fig. 7). A corner of the painted design came under the western section. Its length was parallel to the mud-brick wall running towards the north-east. Close by, stood a square oven (Fig. 8), full of ashes and bordered by mud-bricks, which was plastered with $\frac{1}{2}$ inch thick coat of mud plaster containing husk (?). The mud floor with paintings extended towards the northern side of the mud-brick wall at almost uniform level. The extensive floor and the painted design over it, having association with high mud-brick walls and a brick-lined oven, suggested some sort of ceremonial or religious character of the Building Level 12.

The mud floor was numbered (32A), over which layer (32) contained light greyish and fine-grained sand.

BUILDING LEVEL 13

It is not certain, how long the massive mud-brick wall of the Building Level 12 remained in use after the painted floor (32), but the wall revealed a course of regularly laid burnt-bricks at the bottom level of layer (31). At that level a line of burnt-bricks with regular edge (Fig. 6) and an oven (?) lined with mud-bricks emerged from the eastern section (Fig. 8). It measured 9 inches wide and nearly 5 feet long. The burnt-brick and the long oven marked the floor of (31). It seemed that the top of the early wall, associated with the last floor of (32), was levelled up and after laying a course of burnt-bricks was re-used as foundation by the builders of another mud-brick wall above, assignable to Building Level 13.

The floor of (30) could be definitely associated with the Building Level 13. The wall stood $6\frac{1}{2}$ feet high and measured $2\frac{1}{2}$ to 3 feet wide (Pl. IV and Fig. 8). Another small structure of mud-bricks ran at a right angle to the high mud-brick wall and showed a doorway 2 feet wide (Fig. 6). At the southern end, where the small structure took a north-easterly direction, the inner face was found to be coated with smooth mud plaster.

BUILDING LEVEL 14

The Building Level 13 did not show any long use by successive floors. The mud-brick wall in layers (30) and (29) with a total thickness of $2\frac{1}{2}$ feet, suggested that it fell into ruins after the time indicated by the floor of (30). An additional structure of mud-clods, topped by regular course of mud-bricks was built against the high wall and used during its associated layers from (28) to (27) (Fig. 3). Layer (28) was composed

of loose brownish earth mixed with potsherds and few charcoal pieces. A circular oven (Fig. 9) and a pot *in situ* were recorded at its bottom level.

At the bottom of layer (27A), a hard floor of mud with a smooth top was revealed in a good state of preservation on which two fire-places (Fig. 9) were extant. The contents of layer (27A) showed loose sandy soil mixed with potsherds. The next layer (27), turned out to be another occupational level at the bottom of which a fragmentary floor of mud, at places paved with burnt-brick, was uncovered.

The composite structure of mud-clods and mud-bricks of Building Level 14 appeared to have stood much higher than the surviving height with which the occupational level (27), the definite mud floor of layer (27A), marked as (27B), and the floor level (28) were all associated.

BUILDING LEVEL 15

A mud-brick structure running across the trench, 1A in a north-eastern direction having width of 2 feet and 3 inches, was uncovered in layer (26). The structure partially ran across the mud-brick wall of Building Level 13 but in different alignment. A break 3 feet and 3 inches long in the wall indicated a doorway and provided access to a small room on the southern side, where a small structure of mud-bricks—each brick measuring $12 \times 8\frac{1}{2} \times 1\frac{1}{2}$ inches—ran at a right angle. It, too, showed an opening 26 inches wide near the cross wall mentioned above. The associated floor was paved with mud-bricks measuring $12\frac{1}{2} \times 9 \times 2$ and $14 \times 9 \times 2$ inches. Ashy soil was spread on the floor of layer (26) which is associated with Building Level 15.

The bottom of layer (25) was marked by a thick deposit of burnt material consisting of charcoal pieces and ashes. At that level, the floor was marked by regularly laid burnt-bricks in 1A and 1B and a circular oven with a lump of clay in the middle (Fig. 10 and Pl. III, fore-ground).

BUILDING LEVEL 16

A loose brownish deposit of layer (24) mixed with charcoal pieces and some ash marked another occupation level to which a single-lined burnt-brick structure and a circular oven near the western section were assigned (Fig. 10). On the same level, a complete pot with a lid was recorded *in situ*. Two walls of mud-clods, running parallel to each other, 11 feet apart and in almost an exact east-west direction, appeared.

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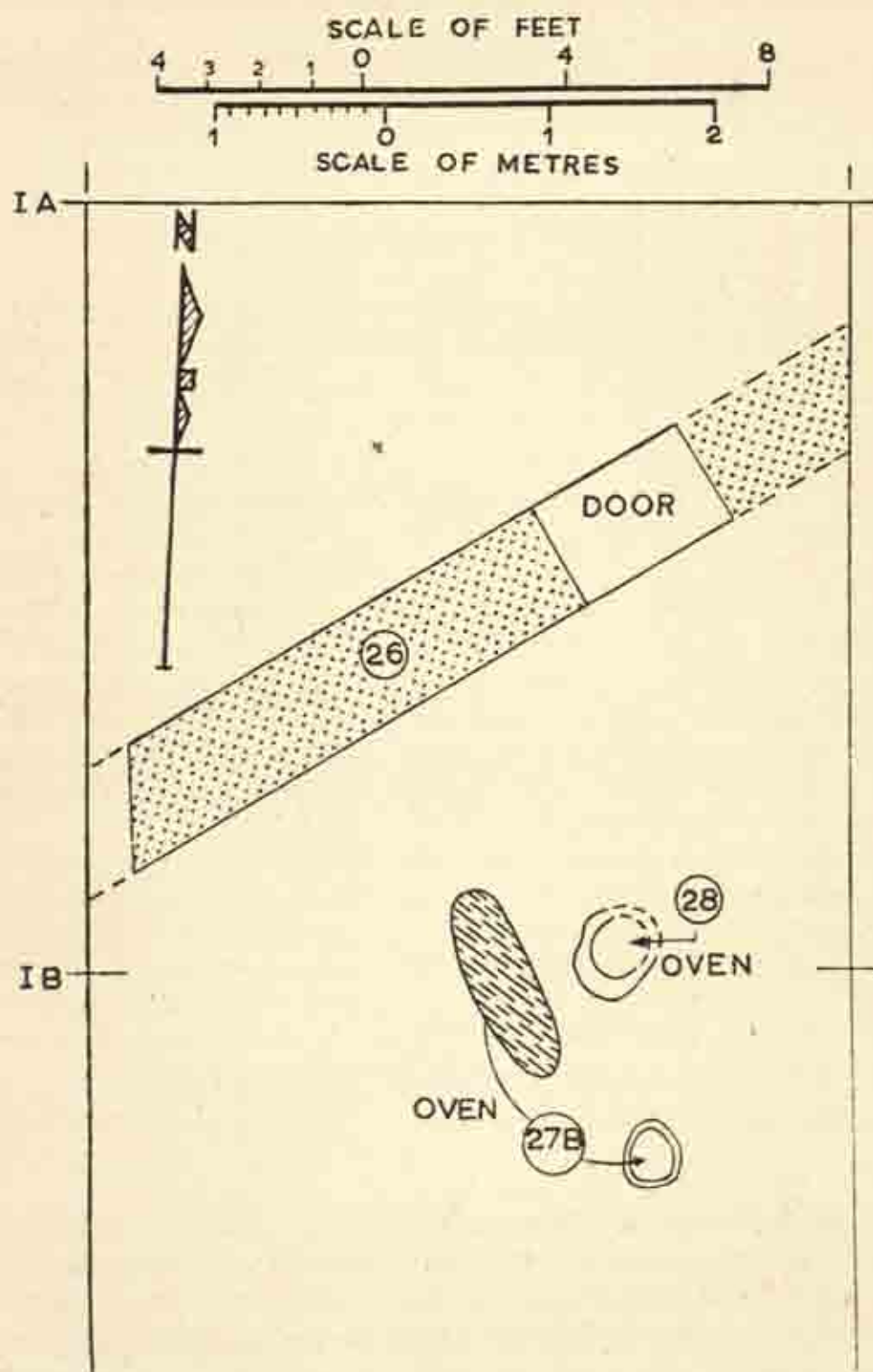


FIG. 9. TLB-I, Structure of Building Level 15 and ovens on the floors of layers (28) and (27B) in Building Level 14.

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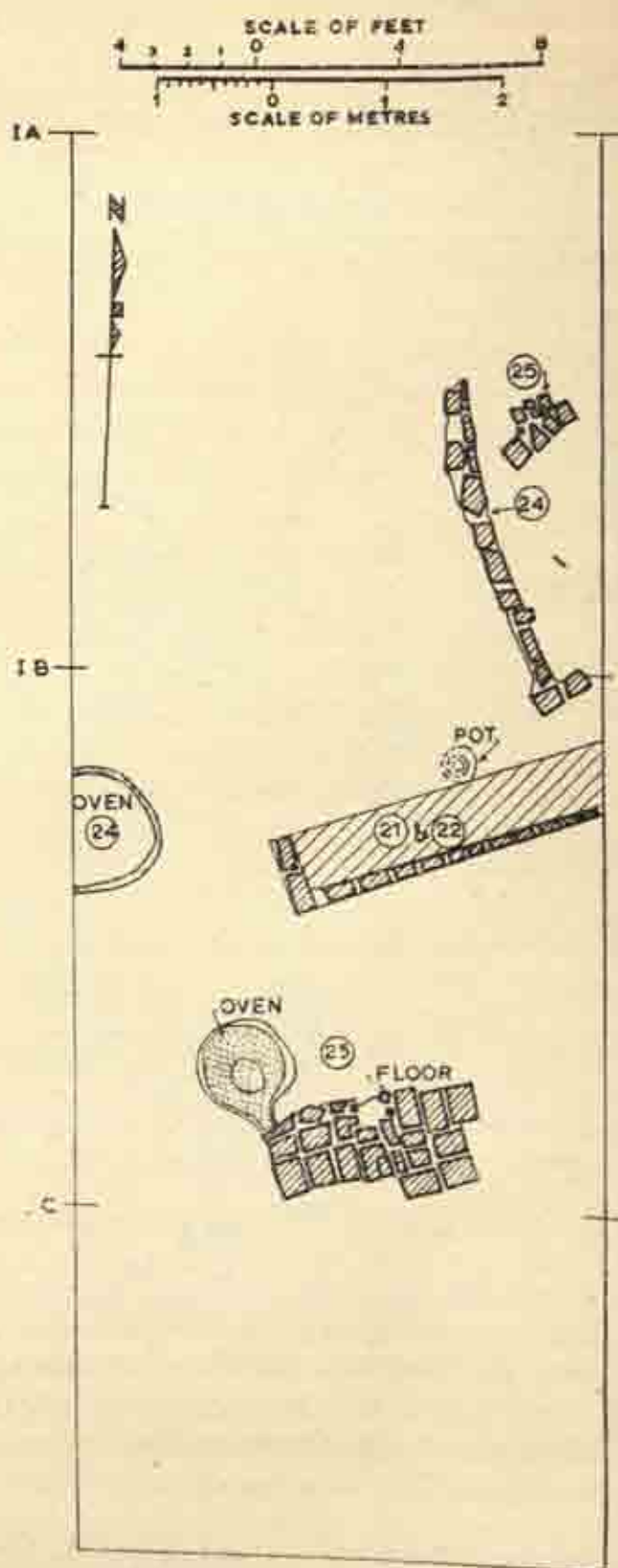


FIG. 10. TLB-1, Floor levels of layer (24) in Building Level 16; of layer (25) in Building Level 15 and burnt-brick wall in layers (21) and (22) in Building Level 17.

The wall on the north was 3½ feet thick and 3 feet high while the southern wall measured 2½ feet at the base and showed maximum thickness of 3 feet. The associated layer (23), being composed of loose brownish earth, yielded a silver coin of Mohammad Ghori, a piece of sgraffiato and a thin piece of Chinese porcelain ware. Both the layers, (24) and (23), were assigned to Building Level 16.

BUILDING LEVEL 17

Layer (22) marked the beginning of intensive building activity on the site. The structures of mud-bricks, mud-clods and some use of burnt-bricks characterise the Building Level 17. A partial plan of four rooms, built of different materials, was brought to light. In the northern part of trench, *i.e.*, 1A, a mud-brick wall 2½ feet wide, running in an east-west direction, was uncovered on the top of an earlier wall of mud-clods. Another wall oriented to the south-east appeared which joined with a regular wall of burnt-bricks (Fig. 11, Pl. III). The burnt-brick wall stood 3 feet high and measured 1-9" wide.

In 1B and 1C the partial plan of the room showed that it was 8 feet 9 inches wide and at least 10 feet 9 inches long. An opening, 3½ feet wide, in the southern wall marked the doorway. In the construction of the mud-brick wall, associated with layer (22), burnt-brick was also used, presumably to strengthen it.

The eastern wall in 1B and 1C turned towards the north-east and disappeared under the section. In its north-eastern corner, a drain 8½ feet long and 1 foot wide, brick-lined, was brought to light as its northern end was a large earthenware vessel, sunk in the floor obviously to receive the refuse water.

There were minor repairs, additions or alterations in the structures (illustrated in Fig. 11 and Pl. II) which were assigned to (20) and represented a major Building period 17.

Above the floor level of (22), represented by the drain and pot, layer (21A) also revealed a hard clay floor on which two pots and two ovens were recorded. Layer (21), which was associated with the layer (20) marked a regular occupational level associated with structures of re-used material (Fig. 12). Its floor was very extensive which survived partially

in 1A and 1B, and showed burnt-brick-bats laid in mud. At the corresponding level, pottery *in situ* and an oven were also recorded.

BUILDING LEVEL 18

Layer (19) marked a definite floor level associated with small structures of mud-brick, being 1½ feet wide and surviving to the maximum height of 1 foot. It ran towards the south-west and measured 6 feet long. On its floor, paved with burnt bricks, a furnace or oven, 3 feet long and 2 feet wide, was revealed (Fig. 13).

A solidly built burnt-brick wall, 3½ feet wide and 2 feet 9 inches long, was partially uncovered in the south-western corner. Since it was sunk into layer (20) and sealed by a hard brownish deposit of layer (18), it may be associated with layer (19) of Building Level 17.

In the limited area of excavation, no structural remains appeared from layers (18) to (12) but regular floor levels were indicated by pottery *in situ*, definite floors of burnt-brick or simply mud.

The floor level of (18) was indicated by patches of burnt-brick flooring and a pot *in situ*. The layer was full of mud-bricks and, therefore, suggested the presence of mud-brick structures in that horizon.

Layer (17A) showed extensive burning spreading over the trench in which a line of ashes and charcoal pieces 9 inches wide, made a semi-circle in the north-eastern corner (Pl. VIII-A).

Layer (17) had a fragmentary burnt-brick floor with pots *in situ* and an oven.

Layer (16) revealed an extensive floor of mud and burnt-bricks on which two pots *in situ* and four ovens were recorded (Fig. 14). One of the pots was sunk into the floor and measured 30 inches deep with a diameter of 27 inches.

Layer (15) gave out loose brownish earth mixed with some ash and charcoal pieces. Layer (14) was similar to that of layer (15) in composition and contents, but marked a floor level by two large pots *in situ*.

Layer (13) yielded a lot of potsherds from its brownish earth laying over a fragmentary burnt-brick floor. Layer (12) was another occupational level in the contents of which lumps of charcoal and reddened earth were conspicuous.

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0 1
SCALE OF METRES



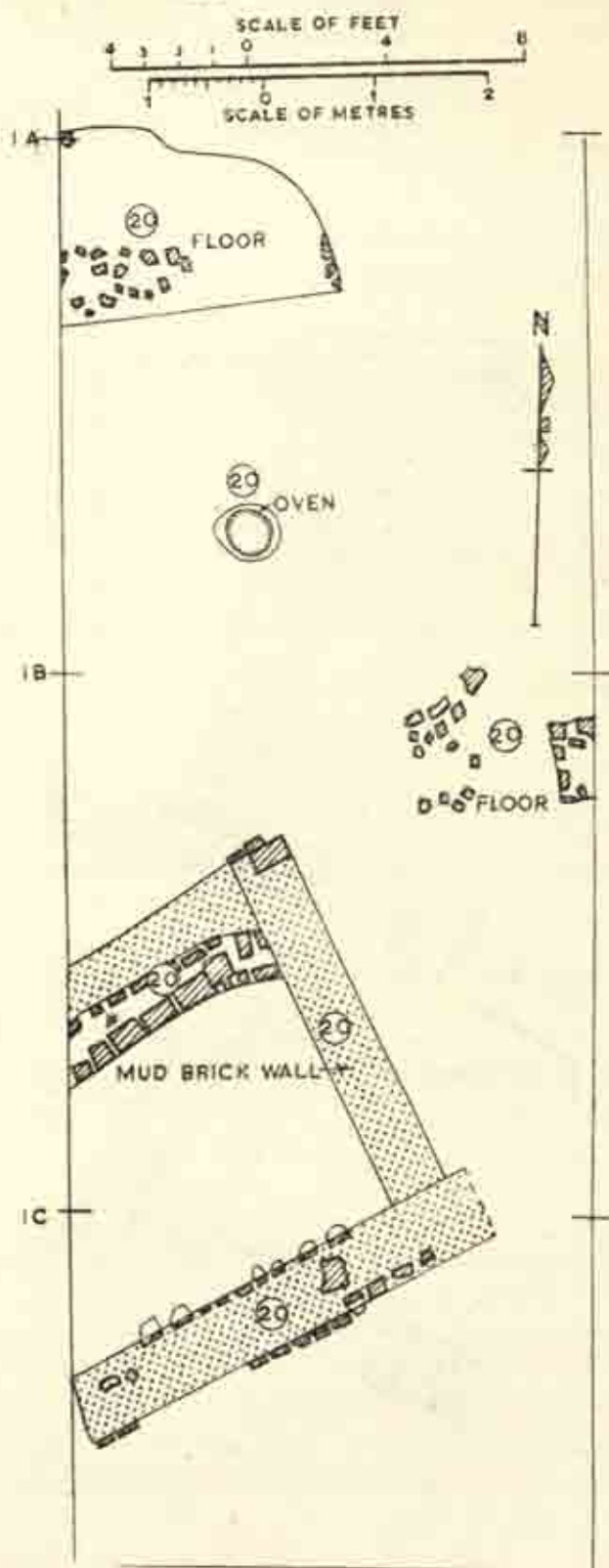


FIG. 12. TLB-I, Mud-brick structures and floor level in layer (20) of Building Level 17.

BUILDING LEVEL 19

This was characterised by a fragmentary structure of burnt-brick, associated with a mud floor of layer (II). A circular oven was also present. The layer (10) above was full of mud-bricks, representing the collapse of a mud-brick structure.

BUILDING LEVEL 20

A mud-brick wall, 1 foot 10 inches wide and 5 feet long, appeared near the western section (Fig. 15) and was found turned at a right angle towards the west. The associated layer (9) had two ovens and the Building Level 20 was sealed by a burnt layer (8).

BUILDING LEVEL 21

A mud-brick wall, 20 inches wide and 6½ feet long, was uncovered in association with layer (7). At the floor level, an oval oven measuring 2 feet 10 inches across and 8½ inches deep was uncovered (Fig. 15).

BUILDING LEVEL 22

The floor of layer (6) was marked by pottery *in situ*, associated with a composite structure of mud and burnt-brick near the eastern section, measuring over 2 feet wide and 8 feet long from north to south (Fig. 15).

BUILDING LEVEL 23

A mud-brick structure cut through layer (6) but associated with (5) survived to a maximum height of 2½ feet. With the same Building Level was associated a mud-brick wall bordered by burnt-brick of layer (4).

Layer (3) showed a floor paved with brick-bats.

BUILDING LEVEL 24

A regular mud-brick wall, running in an east-west direction and 2 feet wide, was uncovered in layer (2). Its foundation was cut into layer (3) and it survived to a maximum height of 2 feet.

BUILDING LEVEL 25

The last Building Level in Trench TLB-I was marked by a 2-course structure of burnt-brick over the mud-brick structure of layer (2). It appeared only 6 inches below the surviving surface and measured 6½ feet long and 1 foot 5 inches wide.

The number of Building Levels uncovered in Trench TLB-I does not represent the total number of occupations and structural remains at the central high mound of Tulamba because the trench was at the second highest point and not on the highest place which was unpractical from the point of view of excavation (*see above*, page 18). Thus we were obliged to miss nearly 14 feet of occupational debris of the last period.

To sum up, the numbers of Building Levels revealed in each period, were as under:—

Period (1)	Building Level No. (2)	Associated layers (3)
Period I: (4 Building Levels)	1 2 3 4	Layer (55) Layer (54) Layers (52) & (51) Layers (50) & (49)
Period II: (6 Building Levels)	5 6 7 8 9 10	Layers (48) & (47) Layer (46A) Layer (46) Layer (45) Layers (44), (43B) & (43) Layer (42)
Period IIA: (1 Building Level)	11	Layer (41)
Period III: (5 Building Levels)	12 13 14 15 16	Layers (34), (33), (32A) and (32). Layers (31) & (30A) Layers (28), (27A) and (27) Layer (26) Layers (24) & (23)
Period IV: (2 Building Levels)	17 18	Layers (22), (21A), (21) and (20). Layer (19)
Period V: (3 Building Levels)	19 20 21	Layer (11) Layer (9) Layer (7)

(1)	(2)	(3)
Period VA:	22	Layer (6)
(4 Building Levels)	23	Layer (5)
	24	Layer (2)
	25	Layer (1)

BRICK MEASUREMENTS

In addition to the dimensions recorded with the structural levels of TLB-I, the following measurements, of mud and burnt-bricks from the same trench, are given below in inches:—

				Mud-bricks		
				<hr/>		
Layer (20)	...	...	...	13	$\times 9\frac{1}{4}$	$\times 2\frac{1}{4}$
				12 $\frac{1}{2}$	$\times 8\frac{3}{4}$	$\times 2\frac{1}{4}$
Layer (21A)	...	...	...	13	$\times 9\frac{1}{4}$	$\times 2\frac{1}{4}$
				13	$\times 9\frac{1}{4}$	$\times 2\frac{1}{4}$
Layer (22)	...	...	...	13	$\times 8\frac{3}{4}$	$\times 2\frac{1}{4}$
Layer (26)	...	...	...	12	$\times 8\frac{3}{4}$	$\times 1\frac{1}{4}$
				Burnt-bricks		
				<hr/>		
Layer (1)	...	...	...	12	$\times 9\frac{1}{4}$	$\times 2\frac{1}{4}$
Layer (6)	...	...	...	10 $\frac{1}{4}$	$\times 7\frac{1}{4}$	$\times 1\frac{1}{4}$
Layer (8)	...	...	...	14	$\times 9\frac{1}{4}$	$\times 2\frac{1}{4}$
Layer (16)	...	...	...	12	$\times 9\frac{1}{4}$	$\times 2$
				13 $\frac{1}{4}$	$\times 9$	$\times 2\frac{1}{4}$
				12 $\frac{1}{2}$	$\times 9$	$\times 2$
				13 $\frac{3}{4}$	$\times 9$	$\times 1\frac{1}{4}$
				11	$\times 8\frac{3}{4}$	$\times 2$
Layer (17)	...	...	...	13 $\frac{1}{4}$	$\times 11$	$\times 2\frac{1}{4}$
Layer (18)	...	...	...	12	$\times 9$	$\times 2$
				11	$\times 9$	$\times 2$
Layer (19)	...	...	...	13	$\times 10\frac{1}{4}$	$\times 2\frac{1}{4}$
				12 $\frac{1}{4}$	$\times 9\frac{1}{4}$	$\times 2$
				13 $\frac{3}{4}$	$\times 10$	$\times 2$
				10 $\frac{1}{4}$	$\times 7\frac{3}{4}$	$\times 2$
				13	$\times 9$	$\times 2\frac{1}{4}$
				12	$\times 8\frac{1}{4}$	$\times 2$

Layer (20)	...	...	...	$12\frac{1}{2} \times 8\frac{1}{2} \times 2$ $13 \times 9\frac{1}{2} \times 2\frac{1}{2}$ $12\frac{1}{2} \times 9 \times 2$
Layer (21)	...	...	...	$12\frac{1}{2} \times 9 \times 2$ $12 \times 9 \times 2\frac{1}{2}$ $11 \times 7\frac{1}{2} \times 1\frac{1}{2}$
Layer (21A)		...	...	$12\frac{1}{2} \times 9 \times 2$ $13 \times 10 \times 2\frac{1}{2}$
Layer (22)	...	...	...	$12\frac{1}{2} \times 9\frac{1}{2} \times 2$ $9 \times 2\frac{1}{2} \times 2$ $12 \times 9 \times 2\frac{1}{2}$
Layer (23)	...	...	...	$12 \times 8\frac{1}{2} \times 2$
Layer (24)	...	...	...	$14 \times 9 \times 2\frac{1}{2}$ $9 \times 13\frac{1}{2} \times 3$
Layer (25)	...	...	...	$12\frac{1}{2} \times 9 \times 2$
Layer (26)	...	...	...	$12\frac{1}{2} \times 9 \times 2$ $14\frac{1}{2} \times 9 \times 2$
Layer (29)	...	...	...	$12 \times 5\frac{1}{2} \times 3$

TRENCH TLB-II

The small exploratory trench, measuring 10 feet wide and 25 feet long, on the slope of the encircling mound on the northern side separated from the high mound by a wide depression (Fig. 2), was excavated down to 10 feet. Two floors and a regular structure of mud-brick appeared up to layer (8) and there was no evidence, in the area excavated, to show the presence of an earthen rampart. Antiquities and pottery recovered up to 10 feet depth were assignable to period III, corresponding to layers (35) to (23) in the main Trench TLB-I, and period IV. The stratigraphy of this trench was as follows:—

Starting from top, decomposed mud-bricks characterised layer (1).

Layer (2) was associated with a mud-brick structure, 2 feet 6 inches wide and 3 feet high, running in an east-west direction. Layer (2A), in fact, marked the floor level of layer (2).

EXCAVATIONS AT TULAMBA

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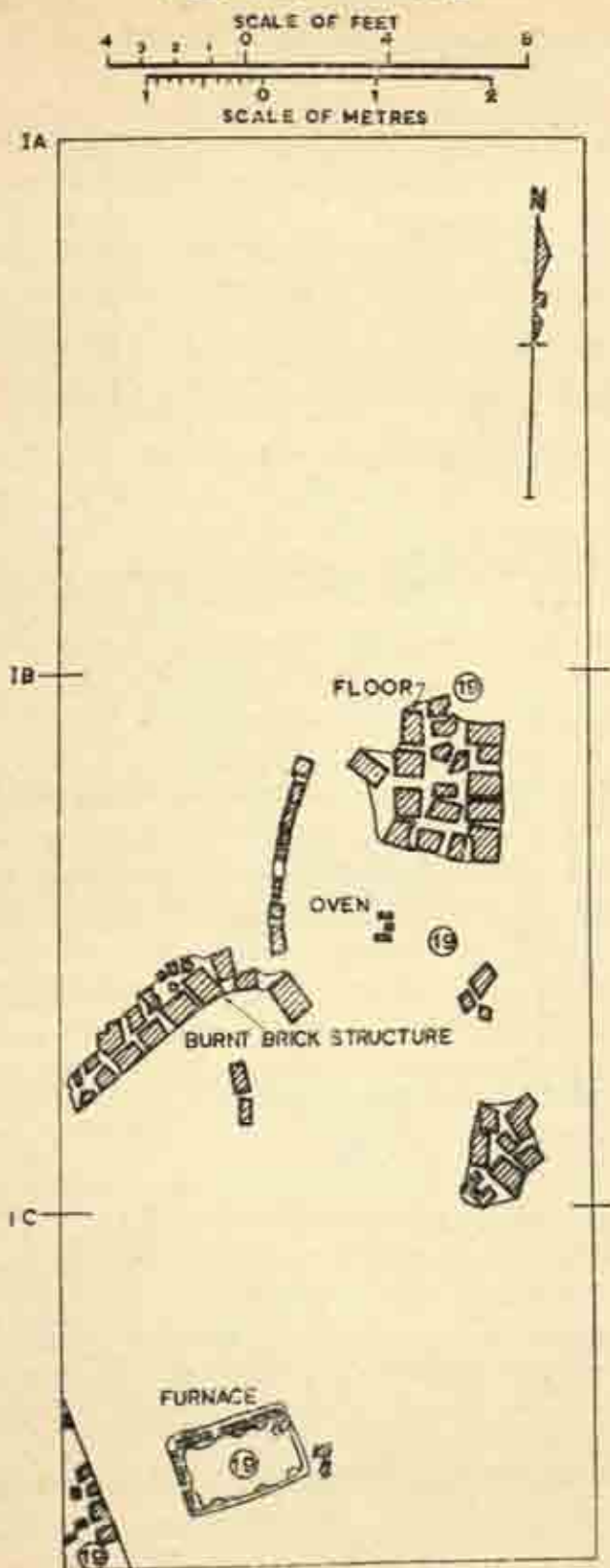


FIG. 13. TLB-1, Brick-paved floor of layer (19) and a rectangular furnace of Building Level 18.

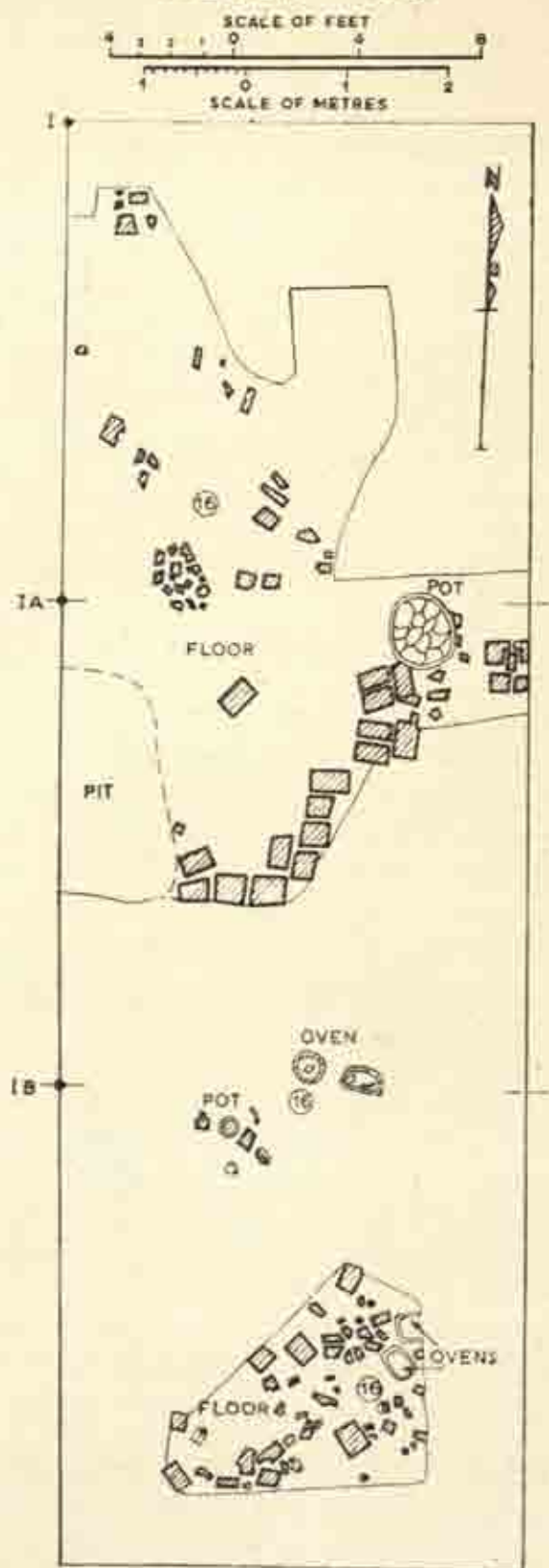


FIG. 14. TLB-I, Floor level with pottery *in situ* and ovens in layer (16).

Layer (3) was composed of brownish earth in which a number of fallen mud-bricks were present, lying over a floor of hard earth. Layer (4) also contained hard brown earth.

Layer (5) showed ashy soil in which a small pottery vase, containing 32 beads and a silver pendant, was found.

Loose brown soil mixed with charcoal pieces marked layer (6) and also layer (7).

Layer (8) was composed of hard earth the bottom of which was marked by ashy streaks. Pottery *in situ* was recovered in layer (8).

After these discoveries, concerning the contents of the mound up to 10 feet depth, further diggings were stopped in this trench. It should be noted that TLB-II did not cover the entire breadth of the supposed "ramparts", but revealed deposits on the southern slope only which faced the central high mound.

TRENCH TLB-III

The trench in the middle of the depression surrounding the high mound revealed an interesting story of deposits (Fig. 16). Layers (1) to (3) with a total thickness of 3 feet, represented mud and other materials brought down by rain from the adjoining mounds. Layer (4) showed numerous brick-bats but from layers (5) to (10), amid muddy and sandy streaks, numerous potsherds were encountered which showed an overall thickness of 6 feet. The pottery collected from these layers was comparable with that from layers (17) to (22) in main Trench TLB-I and belonged to period IV.

The underlying layers (10) to (16), consisted of clean silt and sand as if laid by the river. Pottery from those layers was sparse and showed a great mixture of types. The whole assemblage was comparable with that of period III in the main Trench TLB-I from layers (35) to (23). The successive layers of silt and sand with a total thickness of 8 feet, showing their gradual deposition and the presence of pottery, etc., in each layer, rules out the possibility of sudden or violent floods. The full extent or width of those deposits was difficult to locate in the area of excavation but the existence of a wide moat during period III may be presumed.

On the top of layer (11) and, uniformly sealed by (10), a complete skeleton of a horse was discovered (Pl. VIII-B).

A change in stratigraphy was noticed from layer (17) downwards. Black ashes, pottery, brick-bats and brownish earth were encountered.

Below layer (20), regular layers were found which were disturbed or cut, perhaps intentionally and a concentration of silt and sand was noticed in the eastern half of the trench. The silt appeared to be deposited in a V-shaped ditch, at least 7 feet deep and 35 feet wide at the edges. The potsherds recovered from the ditch in layers (21) to (24) belonged partly to period IIA but mostly to period IIB. If the depression containing the silt layers (20) to (24) in a V-shaped area represented a ditch or moat, it should be assigned to the period IIB, belonging to approximately the 6th century A.D.

The layers (25) to (27) in which the ditch was cut, yielded pottery specimens belonging to period IIA comparable with those from (41) to (39) of the main Trench TLB-I.

The pottery from layers (28) to (31) in TLB-III was without any impressed design like that from layers (49) to (57) in TLB-I. The form of the vessels was also comparable with that of period I of the main Trench TLB-I. The following details may be added.

Layer (31) was composed of hard brownish earth, the bottom of which was full of sand.

Layer (30) was another deposit of brownish earth containing some potsherds.

Layer (29) revealed loose greenish soil mixed with potsherds and some charcoal pieces.

Layer (28) was similar to that of layer (29).

Layer (27) revealed loose brownish soil containing potsherds and charcoal pieces.

Layers (26) and (25) also gave a loose brownish soil mixed with potsherds and some burnt-brick-bats.

TRENCH TLB-IV

The remnants of the burnt-brick fortification wall which must have surrounded the central high mound were located on the southern

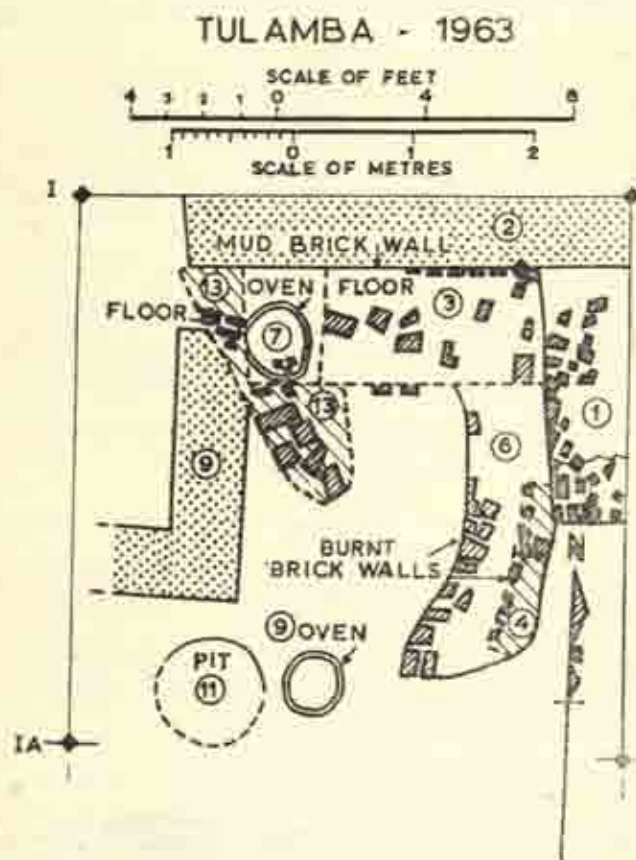


FIG. 15. TLB-I, Mud-brick and burnt-brick structures of Building Level 20 in layer (9); of Building Level 22 in layer (6); of Building Level 24 in layer (2) and of Building Level 25 in layer (1).

TULAMBA 1963 SOUTHERN SECTION OF TRENCH III

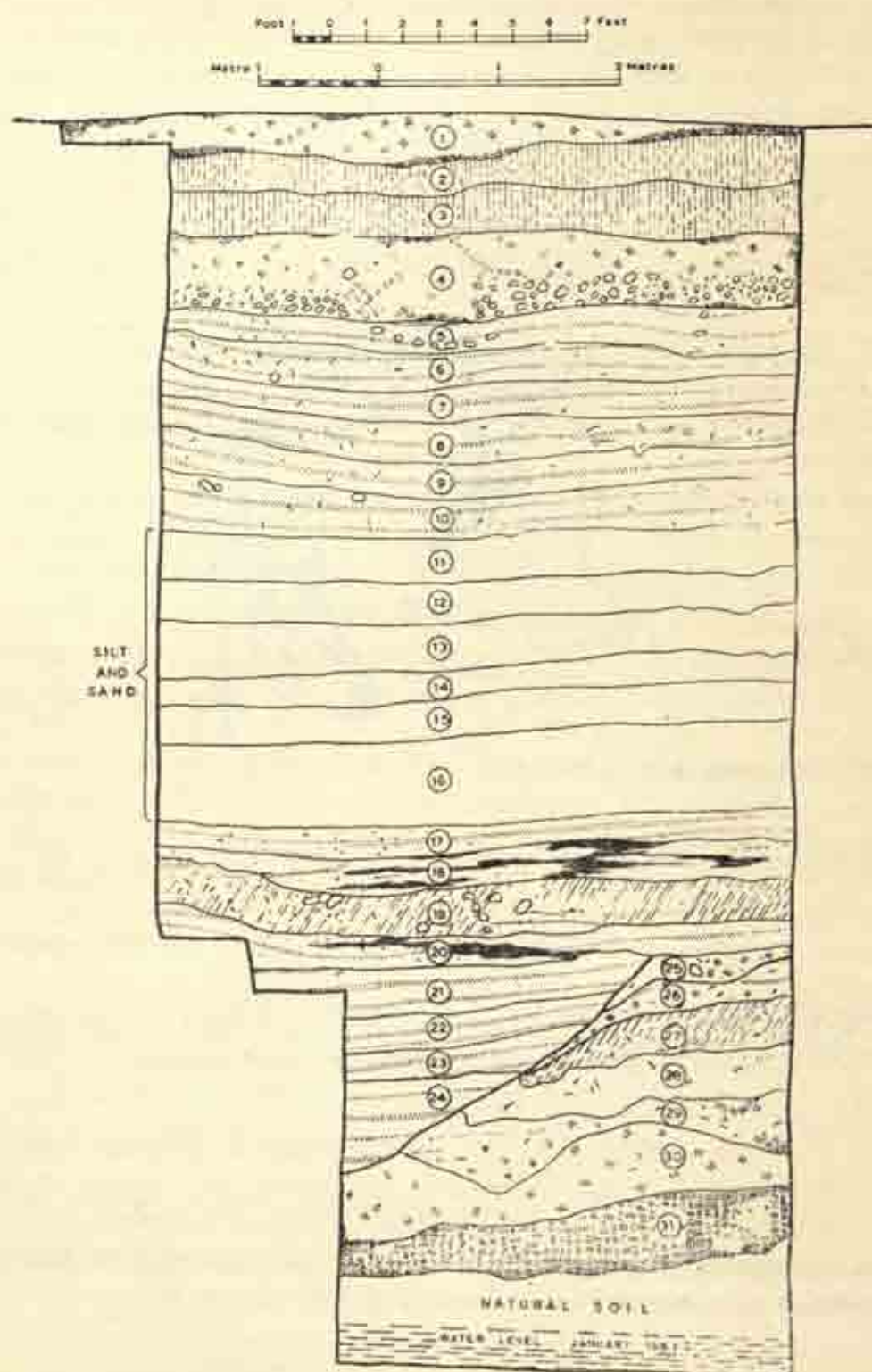


FIG. 16. TLB-III, Section through the moat.

side where a limited clearance of the eroded section revealed the base of the fortification.

It survived to the maximum height of 8 feet and measured $6\frac{1}{2}$ feet wide at the base. The outer (southern) face was almost vertical but three diminishing off-sets were built internally, making the width of the wall 46 inches at the top (Pl. X). The size of bricks averaged $13 \times 9 \times 2$ inches.

The fortification wall was built over an early wall of burnt-bricks, each measuring $12\frac{1}{2} \times 9 \times 2\frac{1}{4}$ inches. The associated layers of the early wall and those of the fortification revealed numerous specimens of "Tulamba Stamped Ware" belonging to period III.

The date of the fortification hinted by a few pottery types, fairly fits in that of Trench III in which layers (11) to (16), composed of clean silt and sand, revealed pottery of period III. It seems very likely that the brick fortification was a part of the defensive system to which the wide moat of period III belonged.

POTTERY

Pottery from the stratified levels of the main trench on the central high mound TLB-I, was found in abundance, providing a basic sequence of the ceramic types at Tulamba enabling comparison to be made between the pottery of other trenches and that from the newly explored sites. With the exception of certain decorated sherds the entire material was new to our knowledge. Therefore, it presented obvious difficulty in making the selection and preparing a classification of types from each cultural horizon. In dealing with the bulk of new ware the repetition of certain types in various periods was unavoidable in order to indicate continuity, overlapping or frequency in the established sequence of the site. In the detailed description of selected pottery on Figs. 17 to 36, effort has been made to keep the relative sequence intact by recording the layer number of each find along with its grouping within the proposed brackets of the chronology.

The pottery of Tulamba is wheel made and is either red, pale-red or dull-red ware. Often it is well-fired and medium in thickness, though some thick-bodied vessels and a few thin specimens are also present. Grey ware is unusual and only 5 pieces were found. The pottery is entirely of a utilitarian type and no fashion ware was found.

The whole pottery was divided into five main periods with three sub-divisions; two in period II and one in period V, on the basis of occurrence of distinctive ware and other features in each period. These have been pointed out in the relevant pages that follow. Suffice it is to mention that period I revealed plain ware with rare specimens of impressed designs of the simplest character. Period II was marked by pottery with impressed designs occurring with undecorated plain ware. The impressed designs considerably degenerated in the sub-period IIA and totally disappeared in IIB. Period III was characterised by the occurrence of a large quantity of "Tulamba Stamped Ware" with a variety of designs, amongst which those from the early levels generally show mica dusted over the surface. Pottery with designs painted in black also appeared. Both painted and "Tulamba Stamped Ware" decreased in quantity during period IV and some new types of plain ware appeared which continued in period V with a change in the stamped designs. Period VA was marked by the appearance of glazed ware.

Before describing the pottery with impressed designs from the levels belonging to periods II and IIA and "Tulamba Stamped Ware" of periods II, IV and V and the painted ware recovered mostly from period III, other types of pottery found from the excavation and surface of the mound, are classified as follows:—

POTTERY WITH RELIEF DECORATION

Four specimens of red ware having decoration in relief representing human and animal figures are illustrated below:—

- (i) Pl. XIII, No. 4: A fragment of a red ware, of well-levigated clay and well-fired, showing a group of three snakes and two floral motifs and parallel lines in relief.

TLB-318, Surface.

- (ii) Pl. XIII, No. 5: A potsherd of red ware showing a human figure with both hands raised and holding an object in the right hand. The upper edge is painted in black. The whole design is dusted over with mica.

TLB-218, IB, layer (27), period III.

- (iii) Pl. XIII, No. 7: A fragment of red ware, of fine fabric, showing horse riders and a deer in the middle. This probably depicts a

hunting scene. A red band is painted on the upper side. The design in relief is dusted over with mica.

TLB-95: From the section of the low mound south of high mound belonging to period III (?).

- (iv) Pl. XIII, No. 10: A piece of dark-red ware, showing a running horse with a rider in relief. The horse is decorated with mica.

TLB-240, IB, layer (28), period III.

POTTERY MOULDS

- (i) Pl. XIII, No. 6: A piece of red ware, well-fired, thick-bodied showing roughly incised circular lines with a dot in the middle.

TLB-255, III, layer (4), period V.

- (ii) Pl. XIII, No. 11: A pottery mould with a roughly incised circular motif and wavy lines.

TLB-249, III, layer (3), period VA.

An over-fired piece of pottery having a stamped circular design with prominent rays, was found. From the surface this may have been a mould, but it is very doubtful because the irregularity of many designs stamped on the pottery, indicates that all were stamped and not moulded. This piece is illustrated on Pl. XIII, No. 8.

POTTERY WITH CUT DESIGN

- (i) Pl. XIII, No. 9: A single specimen of light-red ware belonging to a miniature vase with straight neck and featureless rim has a triangular cut design on the shoulder.

TLB-332, layer (40), period IIA.

PAINTED GLAZED WARE

Glazed ware, some of which is painted, is illustrated on Fig. 34, Nos. 8 and 4. Other specimens of different types, as indicated by the surface, are described below:

- (i) Pl. XIII, No. 13: Fragment of a bowl of red ware, showing designs in black on opaque glaze with some traces of blue glaze.

- (ii) Pl. XIII, No. 15: Fragment of red ware painted with black over a light yellow glaze on the inner side while the exterior shows green glaze.

POTTERY WITH STAMPED HUMAN AND ANIMAL FIGURES

Some specimens of pottery, stamped with human and animal figures, are described separately:

- (i) Pl. XIII, No. 1: A pale-red ware piece, thick-bodied showing a crude human figure, perhaps impressed with a rectangular seal.
TLB-327, IA, layer (38), period IIB.
- (ii) Pl. XIII, No. 3: Fragment of red ware showing a standing human figure.
TLB-342, IB, layer (44), period II.
- (iii) Pl. XVII, No. 1: Fragment of red ware showing a human face.
TLB, IA, top soil, period VA (?).
- (iv) Pl. XVII, No. 2: Ducks stamped on red ware piece.
TLB, IB, top soil, period VA (?).
- (v) Pl. XVII, No. 4: Ducks within double border on a red ware piece. The outer edge is rayed.
TLB, I, layer (16), period V.
- (vi) Pl. XVII, No. 5: An unidentified bird depicted on light-red ware piece of a globular vessel.
TLB, IA, top soil, period VA (?).

INSCRIBED POTTERY

- (i) Pl. XIII, No. 2: A square moulded piece of pottery showing three incised lines and two lines in relief.
TLB-355, III, layer (19), period IIB.
- (ii) Pl. XXIX, No. 15: A piece of a bowl of red ware, well-fired and thin-bodied inscribed in Proto-Nagri* with black ink which reads 'Mirgendra'.
TLB-153, IA, layer (20), period IV.

*The writer is indebted to Dr. Ahmad Hasan Dani for the decyphering of this inscription.

POTTERY OF PERIOD I

In period I, from layers (56) to (49) the pottery was of red ware, well-fired and usually medium or thick-bodied. All the specimens were plain except a few showing a decoration of impressed designs recovered mostly from layers (48A) and (49), (Fig. 20, Nos. 16, 19 and 21). The common decoration consisted of a line of triangular notches incised on the neck as Nos. 19 and 21 on Fig. 20. This design first appeared in layer (55) and reappeared in layers (51) and (49). The forms included bowls with disc-based and corrugated profile; bowls with incurved or straight side with an externally grooved rim as on Fig. 17, No. 5; Fig. 18, No. 3; Fig. 20, No. 17; cooking pots with a grooved or plain neck as on Fig. 18, No. 4; jars with a collared rim as on Fig. 19, No. 14; Fig. 18, No. 1; Fig. 17, No. 18; large pans with an externally-thickened rim; pans with incurved sides but externally-thickened as on Fig. 17, No. 20; Fig. 18, No. 17; Fig. 19, No. 6; Fig. 20, Nos. 6 and 8; vessels with a ring base as on Fig. 17, Nos. 14 and 15; with a flat base as on Fig. 19, No. 1; Fig. 20, No. 10; vases with a hollow pedestal base as on Fig. 17, No. 6; Fig. 20, Nos. 7 and 18; spouted vessels; cordoned potsherds as on Fig. 17, No. 19 and vessels with carination near the base or at the shoulder.

A few potsherds showed a red band painted on the neck, on the inner or outer side of the rim.

The representative series are detailed below:—

FIG. 17 (Period I)

1. TLB, IB, Layer (56): Fragment of a large vessel of dull-red ware with a straight and externally thickened rim. It is thick textured with a mixture of husk in the clay. (Reduced to half the scale given below.)
2. TLB, IB, Layer (56): Fragment of a bowl of red ware, thick-bodied and treated on the inner and outer surfaces with reddish wash. The base shows string marks.
3. TLB, IB, Layer (56): Externally-thickened flat-topped and externally-cordoned rim, of light-red ware, treated on the inner surface with red slip.
4. TLB, IB, Layer (56): Fragment of a bowl of pale-red ware having a flat base with string marks.

5. TLB, IB, Layer (56): Fragment of a bowl with an externally-grooved rim. It is of red ware and treated on the inner surface with smooth red slip.
6. TLB, IB, Layer (55): Hollow pedestal of light-red ware with a rough surface at the base.
7. TLB, IB, Layer (56): Fragment of a vase with an out-turned rim. It is of deep-red ware, well-fired and painted on the inside of the rim and the shoulder with red colour.
8. TLB, IB, Layer (55): Fragment of a bowl with an incurved rim and having a prominent flange with perforation. It is of red ware and treated on the inner side with red slip.
9. TLB, IB, Layer (56): Slightly out-curved neck of a vase with externally-thickened undercut rim. It is of pale-red ware and painted on the rim and neck with red.
10. TLB, IB, Layer (55): Out-curved featureless rim of pinkish-red ware, treated on both the sides with a reddish wash.
11. TLB, IA, Layer (56): Fragment of a bowl with an incurved, nail-head rim of coarse fabric but treated on the inner surface with reddish slip.
12. TLB, IB, Layer (56): Fragment of a vase with an out-curved rim, of pinkish-red ware and treated on the exterior with wash. It has soot marks on the shoulder indicating that it was perhaps a cooking pot.
13. TLB, IB, Layer (56): Neck of a vase with an internally-thickened, nail-head rim. It is painted with red colour.
14. TLB, IB, Layer (56): Ring-base of red ware with a smooth inner surface treated with wash.
15. TLB, IB, Layer (56): Ring-base of a vessel of red ware, thick-bodied and showing a smooth internal surface.
16. TLB, IA, Layer (56): Externally-thickened collared and grooved rim of red ware and treated on the external surface with red slip.
17. TLB, IB, Layer (56): Fragment of a bowl with flaring side and featureless rim, showing a number of grooves on the exterior. It is treated with red slip on both sides.
18. TLB, IB, Layer (55): Fragment of a large vessel with an externally-thickened collared and grooved rim. It is of coarse fabric and shows a mixture of mica in the clay.
19. TLB, IB, Layer (56): Fragment of a dull-red ware, having a cordon made of leaf design and a perforated lug.
20. TLB, IB, Layer (55): Fragment of a large pan with incurved externally-cordoned rim and treated on the rim and inner side with red slip. The fabric shows particles of mica.

EXCAVATIONS AT TULAMBA

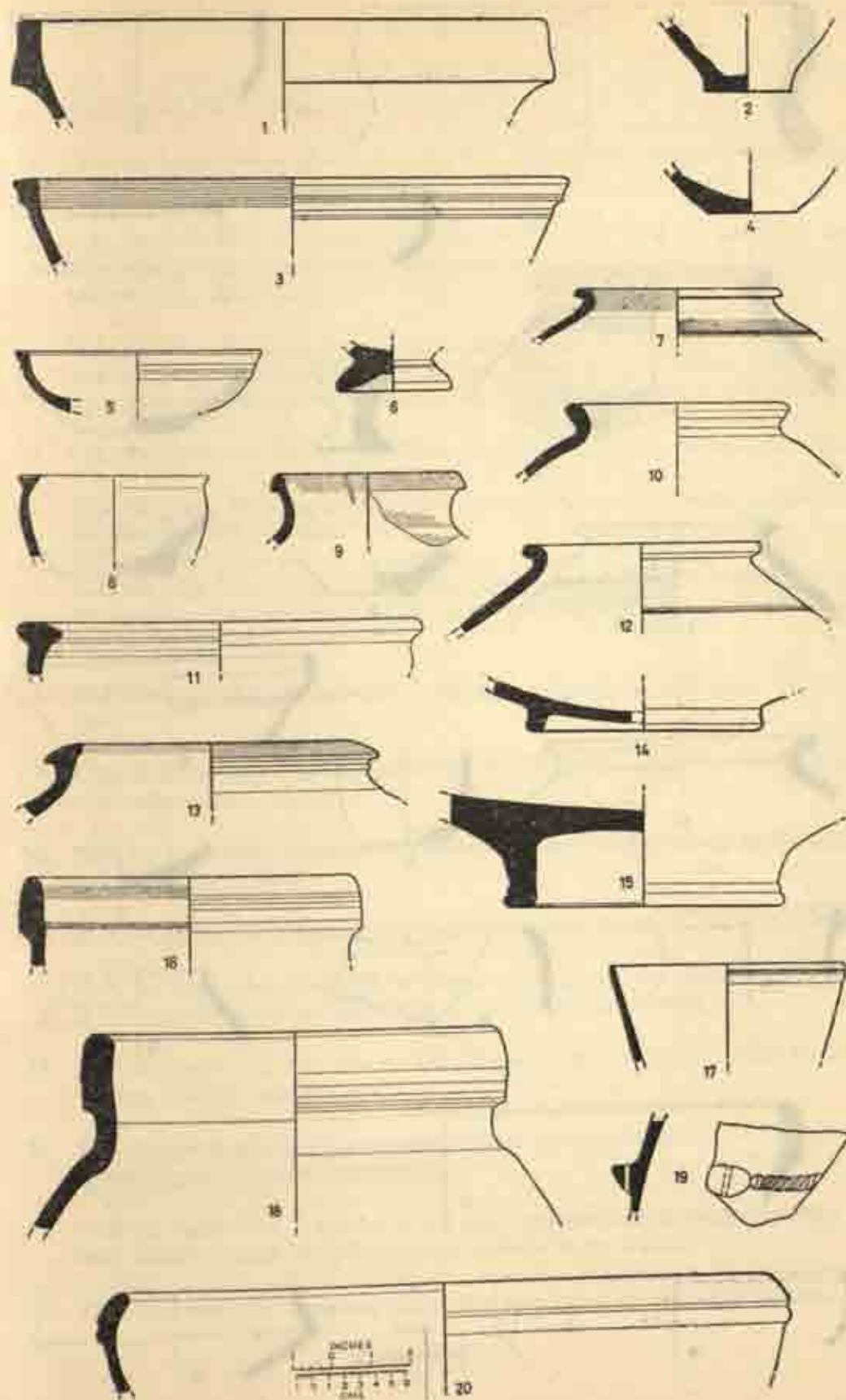


FIG. 17. Pottery of period I, layers (56) & (55).

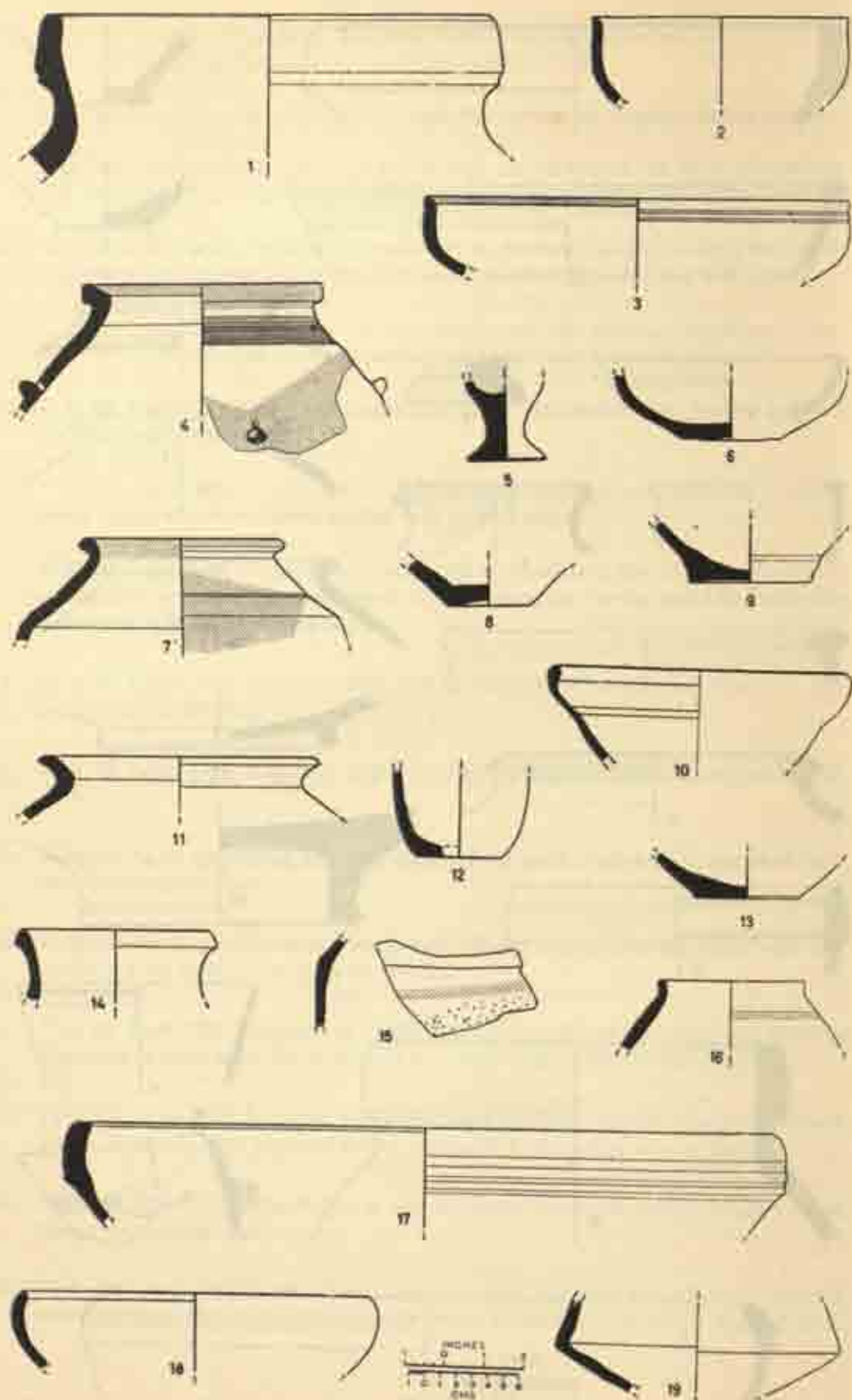


FIG. 18. Pottery of period I, layers (54) & (53).

FIG. 18 (Period I)

1. TLB, IA, Layer (54): Neck of a thick vessel light-red ware with externally-thickened and collared rim. (Compare No. 18, Fig. 17.)
2. TLB, IB, Layer (54): Fragment of a bowl of light-red ware with concave sides and featureless rim. It is treated on both sides with wash.
3. TLB, IB, Layer (54): A variant of No. 2 above but differs from that in having thick fabric and grooves on the exterior of the rim. It is also treated on the outer surface with red slip which is carried over the rim.
4. TLB, IB, Layer (54): Fragment of a vessel with an out-curved rim and a series of grooves on the shoulder. It is of red ware and the fabric shows a mixture of mica in it. A conical lug is made under a perforation and the body seems to be painted with red colour.
5. TLB, IA, Layer (54): High pedestal base of light red ware, coarse fabric and hand-made.
6. TLB, IB, Layer (54): Fragment of a bowl with uneven base of pale ware, treated on both the sides with buff wash.
7. TLB, IB, Layer (54): Fragment of a vessel with out-curved rim and carination under the shoulder. It is of red ware and the fabric has mixture of mica. The outer surface and the rim is painted with red slip.
8. TLB, IB, Layer (54): Fragment of a bowl with a carinated convex base, of light-red ware.
9. TLB, IB, Layer (54): A bowl fragment with flat base and flaring sides of deep-red ware with string marks at the base.
10. TLB, IB, Layer (54): Fragment of a bowl of red ware with incurved thickened rim and uneven flaring sides.
11. TLB, IB, Layer (54): Fragment of a vessel with out-curved rim of bright-red ware.
12. TLB, IA, Layer (54): Fragment of a bowl with flat base and almost vertical sides. It is of pale-red ware and treated on both sides with light-red wash.
13. TLB, IB, Layer (53): Base of a bowl of red ware, treated on both the outer and inner surfaces with light-reddish wash.
14. TLB, IB, Layer (53): Slightly convex neck with externally-thickened rim, of light-red ware.
15. TLB, IB, Layer (54): Fragment of red ware, well-fired and showing carination. Its lower surface is made rough by means of a thick coating of mud.
16. TLB, IA, Layer (53): Fragment of red ware with featureless rim and thick sides.

17. TLB, IB, Layer (53): Fragment of a large pan of deep-red ware with an incurved, externally-cordoned rim.
18. TLB, IB, Layer (53): Fragment of a bowl of pale-reddish ware with incurved sides and obliquely-cut rim.
19. TLB, IB, Layer (53): Fragment of a carinated vessel of pale-red ware with rough outer surface below the carination.

FIG. 19 (Period I)

1. TLB, IB, Layer (52): Fragment of a large cooking pan of pale ware and coarse fabric.
2. TLB, IA, Layer (52): Fragment of dull-red ware with straight neck and square rim.
3. TLB, IB, Layer (52): Fragment of a bowl of reddish ware with disc and corrugated flaring sides.
4. TLB, IB, Layer (52): Fragment of red ware with thickened closing rim.
5. TLB, IB, Layer (52): Variant of No. 3 but differs from above in having straight flaring sides.
6. TLB, IB, Layer (51): A piece of dull-red ware with an incurved and externally-grooved rim.
7. TLB, IB, Layer (51): Flat base of a bowl showing string marks, of dull red ware.
8. TLB, IB, Layer (51): Fragment of a bowl of red ware with flat base made with a sharp edge and uneven outer surface.
9. TLB, IB, Layer (51): Flat base of a bowl with flaring sides. It is of dull-pale ware and is treated on both the sides with buff wash.
10. TLB, IB, Layer (51): Disc base of a bowl with prominent string marks at the base and corrugated sides.
11. TLB, IB, Layer (51): Fragment of deep-red ware, well-fired and with an obliquely-cut rim. It has smooth red slip on both sides.
12. TLB, IB, Layer (51): Fragment of dull-red ware with an internally-thickened sharp rim.
13. TLB, IB, Layer (51): Fragment of a bowl of bright-red ware with slightly incurved sides and an obliquely-cut rim. It is treated on both sides with bright red slip.
14. TLB, IB, Layer (51): Neck of a large vessel with externally-thickened and collared rim with a thick profile at the neck. It is of red ware, well-fired and treated on the exterior surface with light-red wash. (Compare No. 1, Fig. 18.)

EXCAVATIONS AT TULAMBA

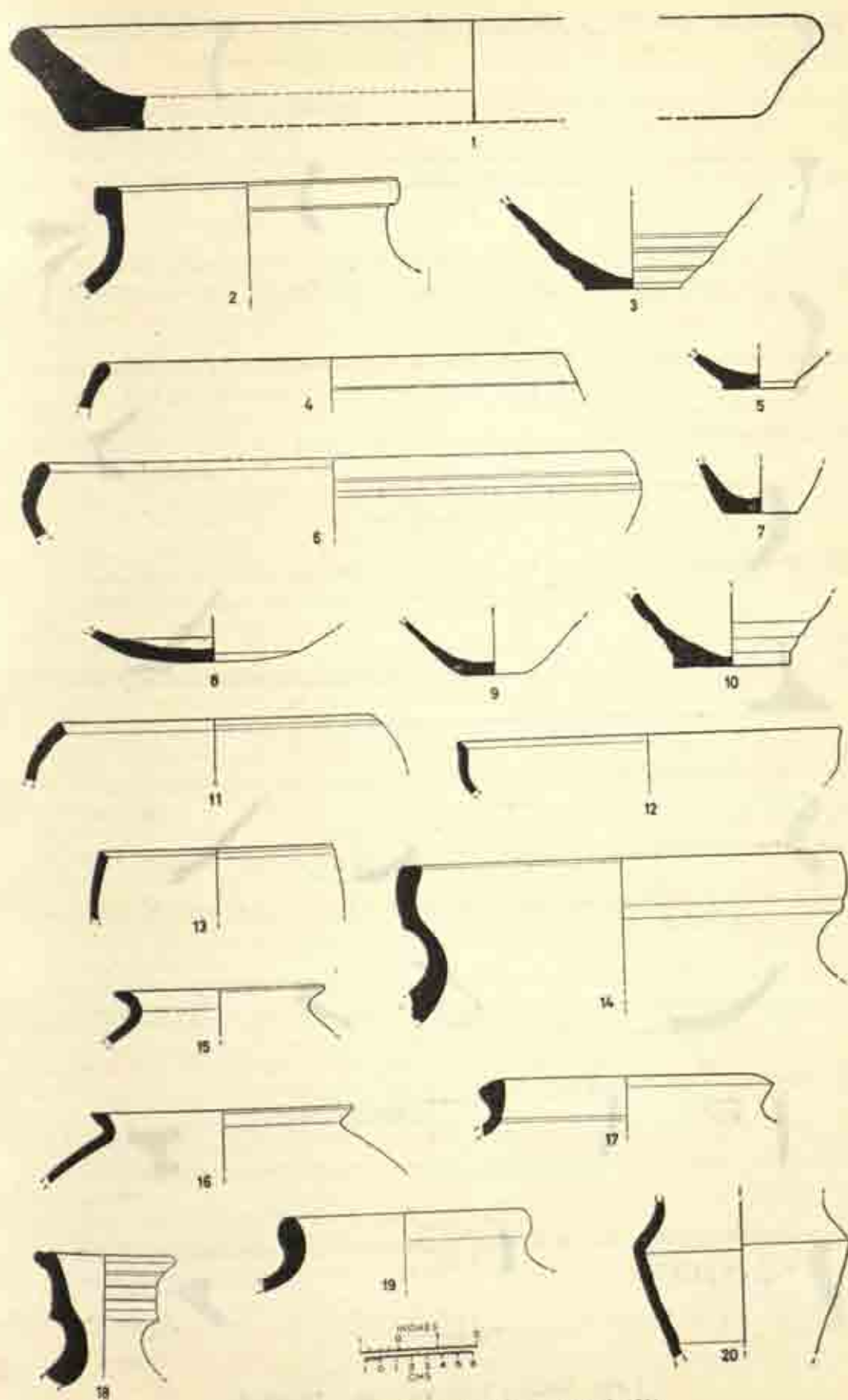


FIG. 19. Pottery of period I, layers (52) & (51).

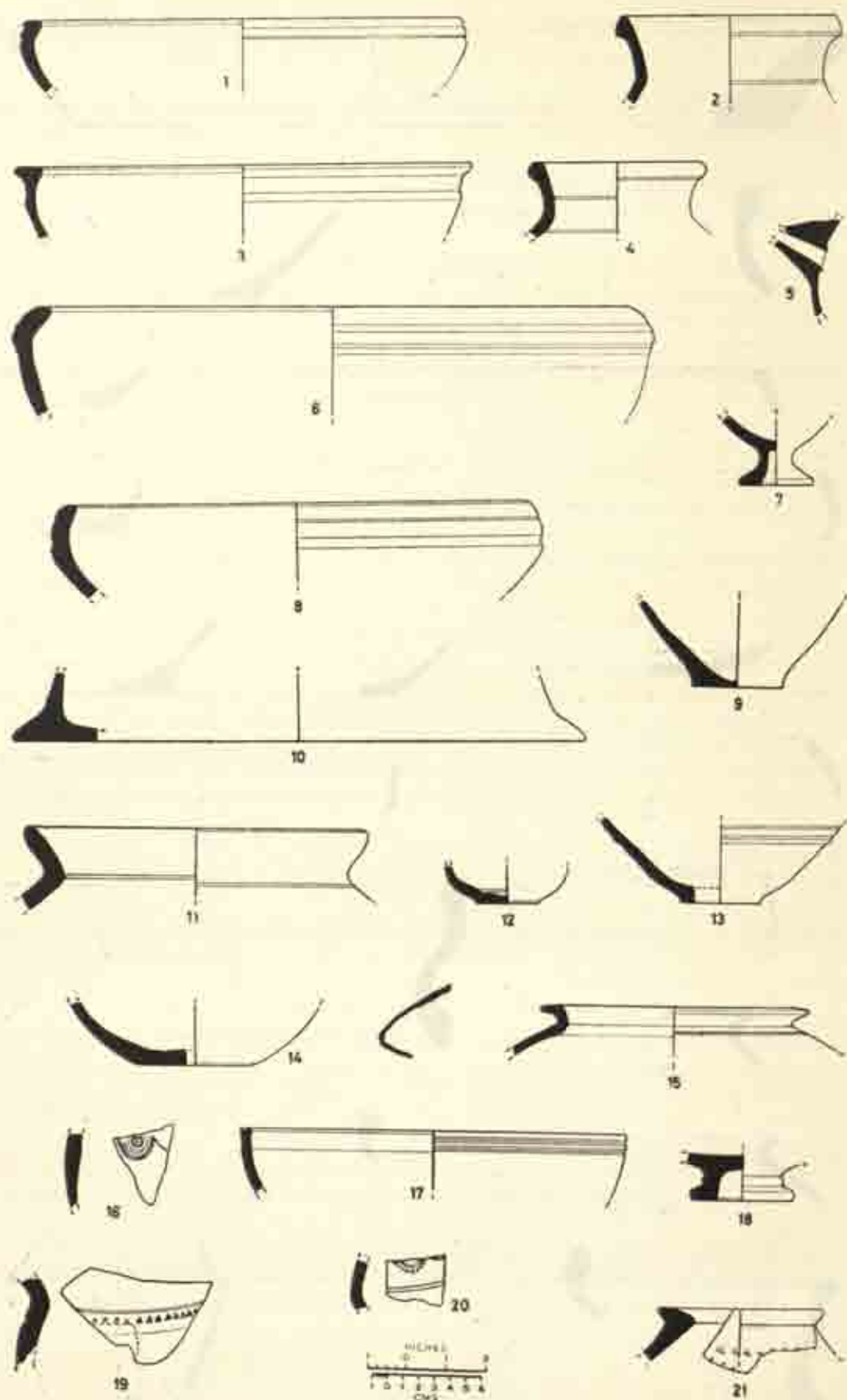


FIG. 20. Pottery of period I, layers (50) & (49).

15. TLB, IB, Layer (51): Neck of darkish-red ware with an out-curved rim and treated on the other surface with pinkish wash.
16. TLB, IB, Layer (51): A piece of red ware with an out-curved, externally-thickened and under-cut rim.
17. TLB, IB, Layer (51): Neck of red ware with an externally-thickened and obliquely-cut rim.
18. TLB, IB, Layer (51): Fragment of an incense burner (?) with an externally-thickened and carinated rim, having a series of grooves and treated on the exterior with reddish slip.
19. TLB, IB, Layer (51): An over-fired fragment with an externally-thickened out-curved rim. It is treated on the external surface with reddish wash.
20. TLB, IB, Layer (51): A piece of red ware with a carinated shoulder. It is treated on the external surface with reddish wash.

FIG. 20 (Period I)

1. TLB, IB, Layer (50): Fragment of a bowl of red ware with an incurved externally-cordoned rim. It is treated on both sides with reddish wash.
2. TLB, IB, Layer (50): A neck of a vessel with an externally-thickened rim. It is of pale-red ware and treated on both sides with light-red wash. (Compare No. 14, Fig. 18).
3. TLB, IB, Layer (50): A piece of pale-red ware with a carinated neck.
4. TLB, IB, Layer (49): Neck-Fragment of red ware with out-curved and externally-thickened rim.
5. TLB, IB, Layer (49): A spout of pale-red ware.
6. TLB, IB, Layer (50): Fragment of a vessel with an incurved externally-cordoned rim. It is of deep-red ware and both surfaces are treated with light reddish wash. (Compare No. 20, Fig. 17).
7. TLB, IB, Layer (49): A fragment of a goblet (?) of dull-red ware showing a rough external surface and having a hollow pedestal base.
8. TLB, IB, Layer (49): Fragment of light-red ware with an incurved externally-grooved rim (Compare No. 20, Fig. 17).
9. TLB, IB, Layer (49): A bowl-fragment of pale-red ware with a disc base and flaring sides.
10. TLB, IA, Layer (50): Flat base of a large vessel of red ware and treated on both sides with deep-red slip.

11. TLB, IB, Layer (49): Neck of pale-red ware with an out-curved featureless rim.
12. TLB, IB, Layer (50): Small bowl of red ware with disc base.
13. TLB, IB, Layer (49): A bowl-fragment of light-red ware with a disc base and flaring profile externally corrugated.
14. TLB, IB, Layer (50): A large bowl fragment of red ware with a flat base made by means of a sharp edge. (Compare No. 8, Fig. 19.)
15. TLB, IB, Layer (50): A piece of a vessel with a straight neck and an externally-thickened rim of dull-pale ware and treated on the outer surface with wash.
16. TLB, IB, Layer (49): A piece of pale-red ware, impressed with circular designs above the loop.
17. TLB, IB, Layer (49): A piece of a bowl of red ware, fine fabric and with an externally-grooved rim.
18. TLB, IB, Layer (50): Hollow pedestalled base of pale-red ware.
19. TLB, IB, Layer (55): Pl. XIV, No. 1: A piece of red ware with fine triangular incisions and treated on the outer surface with red slip. The triangular incised lines also occur in layers (51) and (49).
20. TLB, IA, Layer (48) Pit: A piece of red ware, well-fired, of fine fabric and impressed with a circular design and notches.
21. TLB, IB, Layer (49): Fragment of red ware with an externally-thickened and undercut rim showing triangular impressed designs on the neck. (Compare No. 19 above.)

POTTERY OF PERIOD II

In period II (Figs. 21 to 24), new types of plain pottery were introduced along with pottery with impressed designs. Period II is characterised by the introduction of knobbed lids or jar-covers with cylindrical or conical knobs as on Fig. 21, No. 17 and Fig. 23, No. 2; vessels with a conical base as on Fig. 21, No. 21; bowl with carination near the base as on Fig. 23, No. 14; vertical handles with perforation as on Fig. 23, No. 11; bowl with splayed-out rim as on Fig. 21, No. 18 and Fig. 23, No. 10; dishes with a flat base and incurved sides as on Fig. 23, No. 17 and high necks of water-pitchers as on Fig. 21, No. 6 and Fig. 23, No. 19.

Apart from the new types of plain ware and decorated wares, introduced during period II, some types of period I continued in period II, either in exactly similar forms or with slight variation. The types which

continued to appear in period II were:— vessels with an externally-thickened collared rim as on Fig. 21, No. 7 and Fig. 22, No. 2; pans with an incurved rim as on Fig. 21, No. 10 and Fig. 23, No. 1; vases with a hollow pedestal base as on Fig. 21, Nos. 19, 20, 23 and 24, Fig. 22, No. 8 and Fig. 23, No. 3; bowls with a flat base and corrugated flaring sides as on Fig. 22, No. 19 and Fig. 23, No. 13; bowls with a ring base as on Fig. 21, No. 24; and vessels with a short-everted rim as on Fig. 23, No. 8. Attention should be drawn to a rare piece of grey ware (Fig. 22, No. 13), the only specimen found.

Among the decorated pottery, that from the early levels from layers (48) to (46) shows carefully impressed design consisting of a line of hooks, inverted daggers, rosette and leaf designs. The representation of designs on the decorated wares showed gradual deterioration above layer (45). The triangular notch design in period I continued to appear in period II.

The following were selected:—

FIG. 21 (Period II)

1. TLB, IA, Layer (48): Fragment of a bowl of red ware, fabric showing a mixture of grit and with externally-thickened and cordoned rim.
2. TLB, IA, Layer (48): Neck of a cooking vessel of dull-red ware with internally-carinated neck and beaked rim. The exterior shows marks of soot.
3. TLB, IA, Layer (48): A thick piece of the neck of deep-red ware well-fired with beaked rim.
4. TLB, IA, Layer (48): Neck of a cooking vessel of pale-red ware as in No. 2 above, but differs in having an out-curved externally-thickened rim. It is treated on the exterior with reddish wash.
5. TLB, IB, Layer (48) Pit: A fragment of light-red ware, well-fired with externally-cordoned and an inturned beaked rim.
6. TLB, IB, Layer (48): A neck of a water-pitcher of light-red ware with an out-curved and externally-thickened grooved rim.
7. TLB, IB, Layer (48): An externally-collared rim of a large jar. It is of light-red ware and the fabric shows mixture of husk and grit.
8. TLB, IB, Layer (48): A piece of a vessel (variant of Nos. 3 and 2 above) of pale-red ware with an out-curved rim. It is treated on both sides with light-reddish wash and the fabric shows particles of mica.

9. TLB, IB, Layer (48): Internally-thickened but externally-collared and grooved rim of red ware. A variant of No. 8 above.
10. TLB, IB, Layer (48): Fragment of a bowl of deep-red ware with an inturned, externally-grooved rim.
11. TLB, IB, Layer (48) Pit: Fragment of a bowl-shaped strainer of dull-red ware. It has a flat base having an irregular perforation.
12. TLB, IB, Layer (48): Fragment of red ware, slightly flaring sides and bevelled rim. It is grooved externally and is treated on both sides with red wash.
13. TLB, IB, Layer (48) Pit: Fragment of a vase of dull-pale ware, under-fired with a slightly out-curved featureless rim and a thin profile below the shoulder.
14. TLB, IA, Layer (48): A piece of a bowl of pale-red ware with flat base having string marks and flaring sides.
15. TLB, IA, Layer (48) Pit: Upper part of a bowl of red ware having flaring sides and a featureless rim. This piece seems to be of the same type as No. 14 above.
16. TLB, IA, Layer (48) Pit: Neck of a jar of pale-red ware with an out-curved externally-thickened rim.
17. TLB, IB, Layer (48) Pit: A knobbed lid-fragment with a disc base showing full-red fabric.
18. TLB, IB, Layer (48) Pit: Fragment of a bowl (?) with carinated sides and flaring rim. It is of dull-red ware.
19. TLB, IB, Layer (48): A hollow pedestal with an externally-grooved base, of dull-red ware and coarse fabric.
20. TLB, IA, Layer (48) Pit: A hollow pedestalled base of a vessel, externally-thickened. It is of pale-red ware.
21. TLB, IB, Layer (48) Pit: A conical base of a vessel of pale-red ware.
22. TLB, IA, Layer (48): Lower part of a goblet with a flat, hollow, pedestalled base and flaring sides. It is of pinkish-red ware.
23. TLB, IB, Layer (48): A hollow pedestal base of a vase of light-red ware.
24. TLB, IA, Layer (48) Pit: A ring-base of a bowl with a saggar base. It is of pale ware.
25. TLB, IA, Layer (48): A small vessel of dark-red ware with a sharp featureless rim and externally-grooved at the neck.

EXCAVATIONS AT TULAMBA

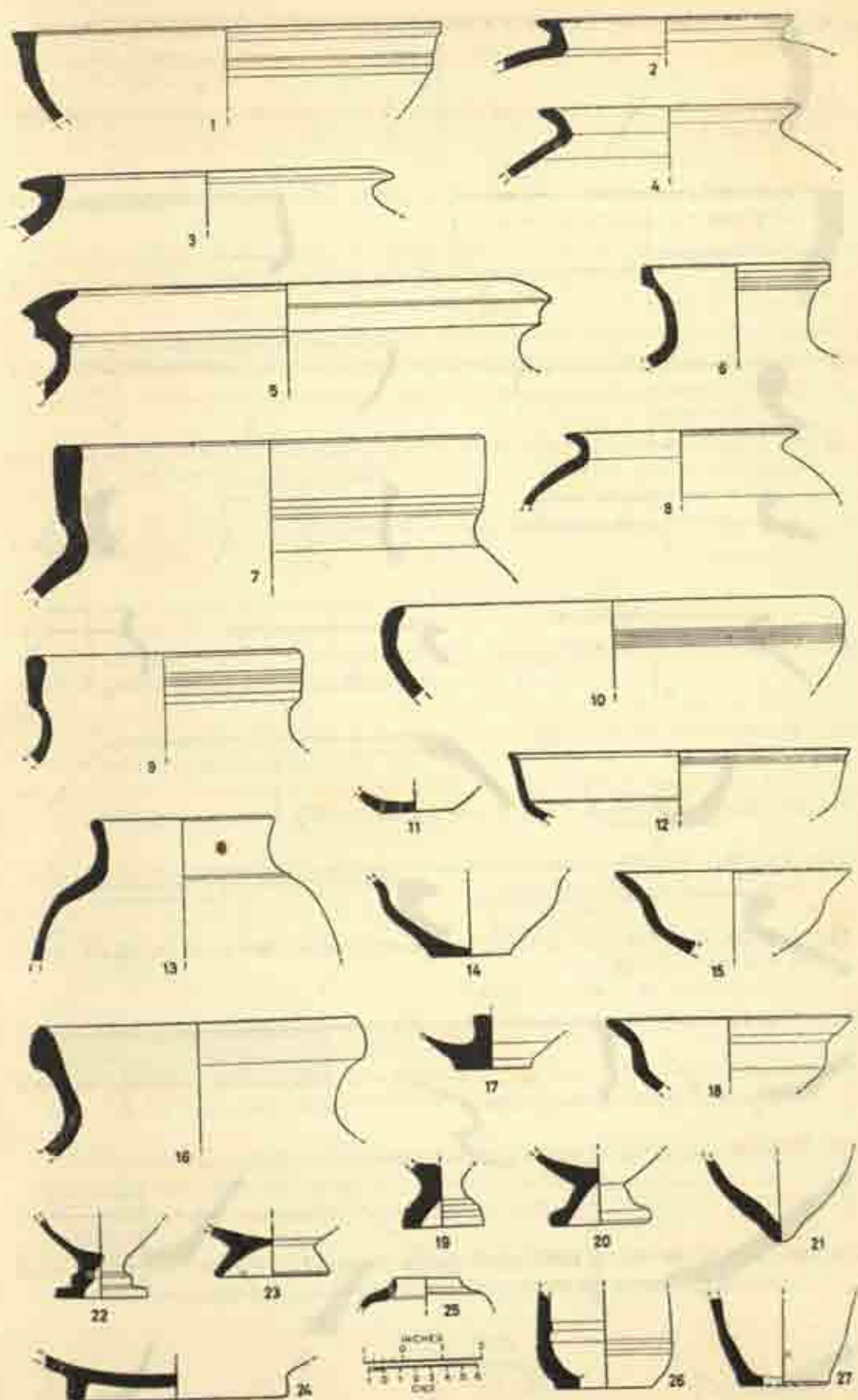


FIG. 21. Pottery of period II, layer (48).

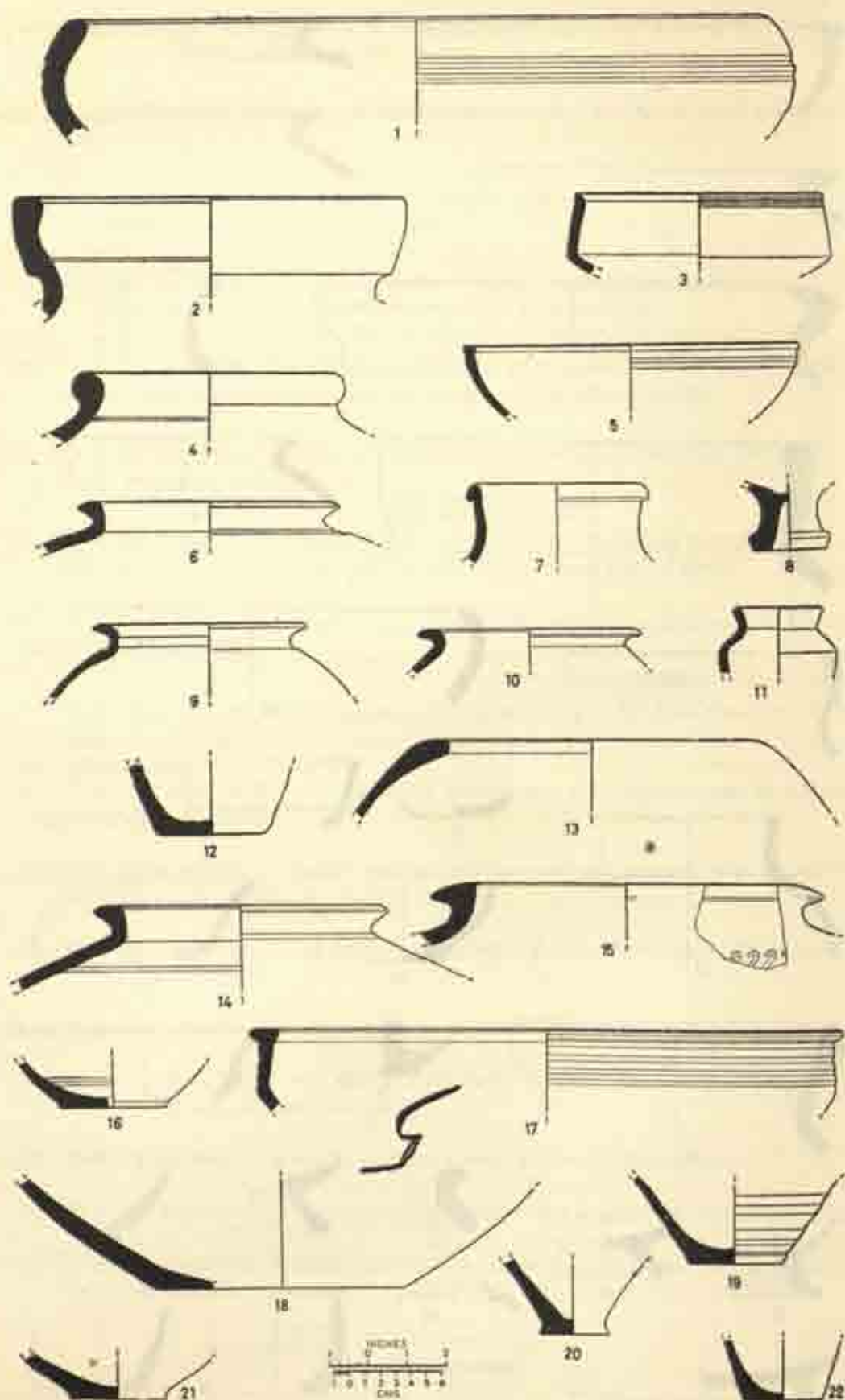


FIG. 22. Pottery of period II, layers (47), (46) and (45).

26. TLB, IB, Layer (48) Pit: A vase fragment of a pale-red ware with flat base and cylindrical-shaped. It has grooves on the exterior near the base.
27. TLB, IA, Layer (48): Fragment of a bowl of red ware with disc base and uneven sides. It shows a finger mark on the inner side.

FIG. 22 (Period II)

1. TLB, IA, Layer (47): Neck of a large vessel with an incurved and externally-grooved rim. It is of deep-red ware and well-fired.
2. TLB, IA, Layer (47): Neck-fragment of an internally-thickened out-curved and externally-collared rim. It is of deep-red ware and well-fired. The type continued upto layer (45).
3. TLB, IB, Layer (47): A carinated bowl of red ware with slightly inturned sides and a bevelled rim, grooved externally.
4. TLB, IA, Layer (47): Fragment of a vessel with an externally-thickened rim. It is of red ware.
5. TLB, IA, Layer (46): Fragment of a bowl of red ware with external grooves.
6. TLB, IB, Layer (46): Carinated neck of a cooking vessel with beaked rim and grooves on the shoulder. It is of light-red ware.
7. TLB, IB, Layer (45): A vertical neck of a water pitcher of red ware with an externally-thickened under-cut rim.
8. TLB, IB, Layer (46): Hollow pedestal base of pale-red ware and of coarse fabric.
9. TLB, IA, Layer (46): Fragment of a vase of red ware, fine fabric with carinated neck and out-curved rim. The fabric shows a mixture of mica in it.
10. TLB, IA, Layer (45): Neck fragment of an over-fired piece of red ware with an out-curved rim.
11. TLB, IB, Layer (46): A piece of a small vase of dull-red ware with a carinated shoulder and an out-curved featureless rim.
12. TLB, IB, Layer (46): A base of a bowl of red ware with uneven flaring sides.
13. TLB, IA, Layer (45): A fragment of a vessel of grey ware with externally-thickened closing rim and a thin profile. It is of fine fabric showing a mixture of mica in it. It is treated on the outer surface with wash.
14. TLB, IA, Layer (45): Fragment of a cooking vessel of red ware as No. 6 above, but differs from that in having plain exterior and pronounced beaked-rim.

15. TLB, IB, Layer (45): Neck of a vessel with beaked rim and decorated on the shoulder with a hook-shaped incised design.
16. TLB, IB, Layer (46): A disc base of a bowl of dull-red ware.
17. TLB, IB, Layer (45): Fragment of a red ware, well-fired with nail-head rim and an externally grooved neck.
18. TLB, IB, Layer (45): A piece of a large bowl of deep-red ware with flaring sides.
19. TLB, IA, Layer (47): Fragment of a bowl of pale-red ware with a flat base and corrugated flaring sides.
20. TLB, IA, Layer (45): A bowl-fragment of dull-red ware with a disc base and flaring sides.
21. TLB, IB, Layer (45): A piece of a bowl of red ware, well-fired with a disc base and showing pronounced string marks.
22. TLB, IA, Layer (45): Fragment of a bowl of red ware, flat base and uneven sides.

FIG. 23 (Period II)

1. TLB, IA, Layer (44): Fragment of deep-red ware with incurved closing and externally-collared rim.
2. TLB, IA, Layer (43B): A conical knob of dark-red ware with coarse fabric.
3. TLB, IB, Layer (43): A hollow pedestalled base of red ware.
4. TLB, IB, Layer (44) Pit: A vessel of red ware with out-curved beaked rim and grooves on the shoulder.
5. TLB, IB, Layer (43): Fragment of dull-red ware with splayed-out rim and grooved neck.
6. TLB, IA, Layer (43B): A splayed-out rim and carinated neck of a vessel of red ware. The shoulder has grooves with two parallel lines.
7. TLB, IA, Layer (43B): As No. 4 above but differs in being dark-red and in having an internally-carinated neck.
8. TLB, IB, Layer (43): A thick everted rim of red ware.
9. TLB, IB, Layer (43): Fragment of a bowl of dark-brown ware with nail-head rim and grooves around the neck.
10. TLB, IA, Layer (43B): Fragment of a dish with flaring rim. It is of dull-red ware.

EXCAVATION AT TULAMBA

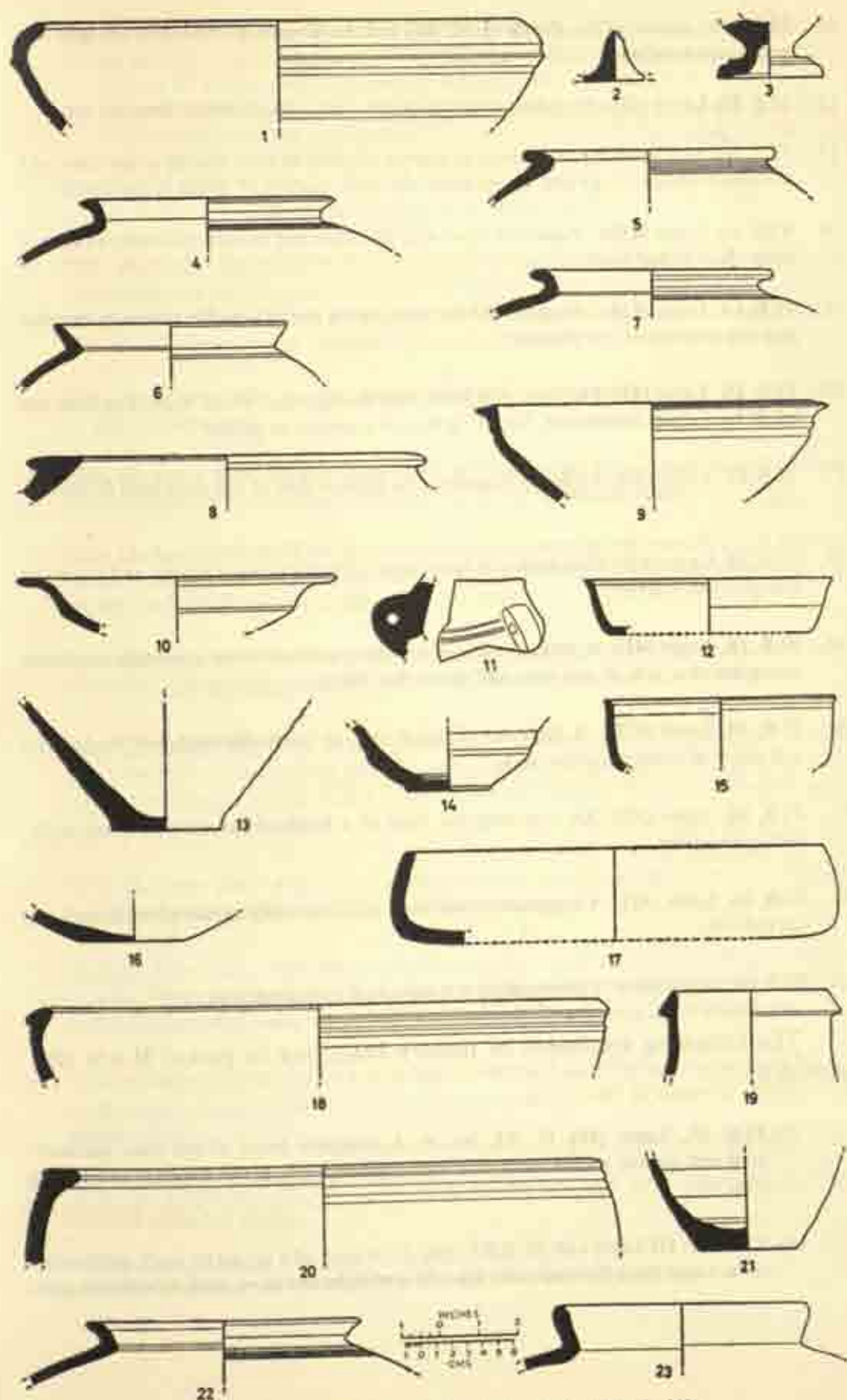


FIG. 23. Pottery of period II, layers (44), (43) & (42).

11. TLB, IB, Layer (42): Potsherd of dull-red ware with a vertically straight and perforated handle.
12. TLB, IB, Layer (43): Fragment of a vase of red ware with internally-bevelled rim.
13. TLB, IB, Layer (44) Pit: Fragment of a bowl of pale-red ware having a disc base with prominent string marks and flaring sides, the outer surface of which is corrugated.
14. TLB, IA, Layer (43B): Piece of a bowl with disc base and uneven externally-thickened sides. It is of red ware.
15. TLB, IA, Layer (43B): Fragment of red ware with a straight profile internally-bevelled rim and grooves on the exterior.
16. TLB, IA, Layer (43): Flat base of a bowl with flaring sides, of red ware. The base was made by a sharp instrument. Similar types are common in period I.
17. TLB, IB, Layer (43): Incurved fragment of a shallow dish of red ware with featureless rim.
18. TLB, IB, Layer (42): Fragment of a large vessel of pale-red ware having nail-head rim and grooved exterior.
19. TLB, IB, Layer (42): A vertical neck of a water-pitcher with an externally-thickened triangular rim. It is of red ware and shows fine fabric.
20. TLB, IB, Layer (43B): A fragment of vessel with an internally-thickened beaked rim and series of grooves on the neck.
21. TLB, IB, Layer (42): An over-fired flat base of a bowl of red ware with internally-corrugated sides.
22. TLB, IB, Layer (42): A fragment of red ware with internally-carinated neck and out-curved rim.
23. TLB, IB, Layer (42): A fragment of red ware with carinated neck.

The following specimens of pottery belonging to period II are also included:—

- (i) TLB, IA, Layer (48). Pl. XI, No. 4: A complete bowl of red ware unevenly-fired and treated on the inner side with reddish wash. It has flat base and flaring rim.
- (ii) TLB-335, III Layer (14) Pl. XXV, No. 3: A neck of a sprinkler with perforation on one side from the rim to the base. It is of light-red ware, made of well-levigated

clay and treated on the outer surface with bright-red slip. Exactly similar types of sprinklers have been recorded at Yaleswaram³⁷ in Hyderabad Deccan, from period III which is between 3rd and 4th centuries A.D., also they are assigned to period IV, 300 to 450 A.D., at Kumarahar³⁸ in Bihar State. At Tulamba, another similar specimen was recorded on the floor of layer (36), belonging to the last levels of period III in TLB-I on the high mound.

FIG. 24 (Decorated Ware of Period II)

1. TLB, IA, Layer (48) Pl. XIV No. 2: A piece of red ware decorated with impressed hook-shape and dagger motifs. It shows fine red slip on the exterior surface. This design was also recorded in layers (46) and (47) where only the dagger motif is represented. The same design occurs in degenerated form in layer (43).
2. TLB, IA, Layer (48): A potsherd of light-red ware impressed with uneven lines irregularly connected.
3. TLB, IB, Layer (48): An over-fired piece of red ware having a rough interior surface while the exterior shows crossed lines in relief making small squares.
4. TLB, IA, Layer (47), Pl. XIV, No. 3: A potsherd of red ware of fine fabric and impressed with daggers pointing downwards. This design also occurs in layers (46) and (43) but with some difference in details.
5. TLB, IA, Layer (47), Pl. XIV, No. 5: (Upside down). Potsherd of red ware, having fine fabric and depicting hook-shaped designs between two lines of rosettes.
6. TLB, IA, Layer (47), Neck of a large vessel of red ware, treated on the outer surface with pinkish wash and having an externally-thickened beaked rim. It is decorated with rows of triangular-incised motifs on the shoulder. Similar decorative designs were also recorded in layer (48).
7. TLB, IB, Layer (46): A potsherd of dull-red ware treated on the outer side with red wash over which a linear design is impressed.
8. TLB, IB, Layer (46): A potsherd of light-red ware, of fine fabric and showing a mixture of mica. Finger marks are visible on the inner surface while the outer surface is treated with a light-reddish wash over which degenerated circular motifs are impressed.
9. TLB, IB, Layer (46): A potsherd of red ware, well-fired and impressed with an obliquely-made dagger design consisting of squares and pointed ends in between a register of grooved lines.
10. TLB, IB, Layer (46), Pl. XIV, No. 4: A potsherd of red ware impressed with an inverted palm leaf design.

37 Abdul Waheed Khan, *Yaleswaram Excavations*, 1963, Fig. XI, No. 11.

38 Altekar and Misra, *Kumrahar Excavations*, 1959, Fig. XXXV, No. 18.

PAKISTAN ARCHAEOLOGY

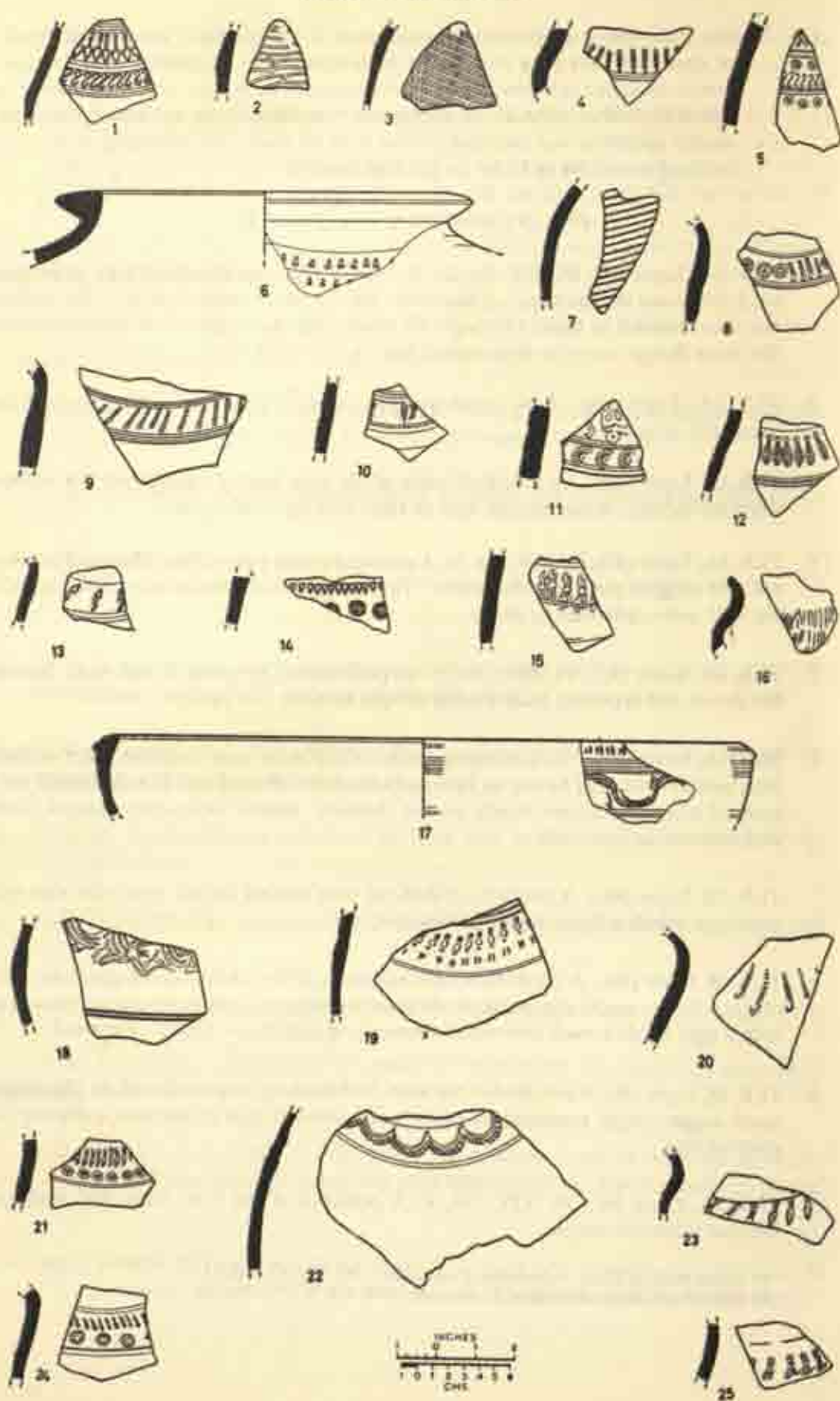


FIG. 24. Decorated ware of period II.

11. TLB, IA, Layer (46): A thick fragment of pottery of dull-red ware, unevenly-fired and roughly impressed with circular and unidentified geometric designs.
12. TLB, IA, Layer (46): A potsherd of red ware impressed with an elliptical-shaped palm-leaf.
13. TLB, IA, Layer (45), Pl. XIV, No. 6: Potsherd of red ware impressed with triangular designs, widely separated from each other.
14. TLB, IA, Layer (45): A potsherd of dull-red ware of coarse fabric, showing impressed circular, floral and triangular designs.
15. TLB, IA, Layer (44): An unevenly-fired fragment of red ware having a black inner surface and a roughly impressed design with double ends below. It may be a degenerated form of the dagger motif.
16. TLB, IA, Layer (43): A small vase-fragment of red ware with out-curved rim and an exterior showing roughly incised vertical lines.
17. TLB, IA, Layer (43B): Fragment of a large vessel with internally-thickened, incurved rim and a notched cordon on the exterior of rim. It is impressed with a wavy design made of square and circular motifs in between two lines.
18. TLB, IB, Layer (43): A fragment of dull-red ware, impressed with an unidentified linear design and double lines in black are painted below.
19. TLB, IB, Layer (43): A fragment of dull-red ware showing a dark outer surface and designs which appear to be a degenerated form of the dagger with double ends.
20. TLB, IB, Layer (43): A fragment with out-curved rim of deep-red ware showing a rough exterior over which dotted lines are impressed obliquely.
21. TLB, IB, Layer (43): A fragment of pale-red ware showing a line of the floral and dagger motif.
22. TLB, IB, Layer (42): A large piece of a vessel decorated at the shoulder with a hanging looped design.
23. TLB, IB, Layer (43): Fragment of a vase of pale-red ware and treated on the outer surface with red slip over which dagger motifs are impressed on the shoulder.
24. TLB, IB, Layer (42): A fragment of light-red ware showing the floral motif and dotted lines.
25. TLB, IA, Layer (42): Fragment of light-red ware decorated with roughly impressed designs of the double dagger.

The following specimen also belongs to the same period:—

- (i) TLB, IB, Layer (43), Pl. XIV, No. 7: A potsherd of red ware, well-fired and showing an impressed loop design comparable with that from Hastinapura, period IV, i.e., 2nd century B.C., to the end of the 3rd century A.D.³⁹

POTTERY OF PERIOD II-A

Period II was marked by disturbed stratigraphy and represented a short duration. Due to certain changes in the ceramic types and in order to keep the material from disturbed layers separate, it was labelled II-A. In period II-A, Fig. 25 and Fig. 27, Nos. 1 to 24, the quality of the painted designs degenerated or the technique was simplified. A few designs as on Fig. 27, Nos. 10, 14 and 24 appeared. Bowls with a splayed-out rim, Fig. 25, No. 21; high necks of water-pitchers, Fig. 25, Nos. 12 and 15; large pans, Fig. 25, No. 3; and cooking vessels, Fig. 25, No. 18 came up from period II. Among the new types, by which the levels belonging to period II-A are distinguished, there are deep bowls with nail head rim, Fig. 25, No. 16 and tumbler-like bowls, Fig. 25, Nos. 9 and 24.

The following specimens are selected:—

FIG. 25 (Period II-A)

1. TLB, IB, Layer (41): A piece of pinkish-red ware, the bottom of which is made rough by applying mud mixed with husk. It is of coarse fabric and has an out-curved rim.
2. TLB, IA, Layer (40): Fragment of a bowl of light-red ware with a slightly convex bottom and grooved internally.
3. TLB, IB, Layer (41): A dish of red ware with flat bottom and straight edge. A cordon with rope design is made near the bottom (reduced to half the given scale).
4. TLB, IA, Layer (39C): A flat-bottomed bowl-fragment of red ware with distinctive string marks.
5. TLB, IB, Layer (41): A large pan of red ware, of fine fabric with a mixture of mica in the clay and having nail-head rim grooved externally. The rim is decorated with three punched circlelets on the lug.
6. TLB, IB, Layer (41): Neck fragment of red ware with an externally-thickened and collared rim. It is treated on both sides with muddy wash.
7. TLB, IB, Layer (39) Pit: Slightly out-curved neck of a water-pitcher of red ware.

³⁹ B.B. Lal, *Excavation at Hastinapura*, in *Ancient India*, Nos. 10 & 11, Pl. XXXII, No. 10.

EXCAVATIONS AT TULAMBA

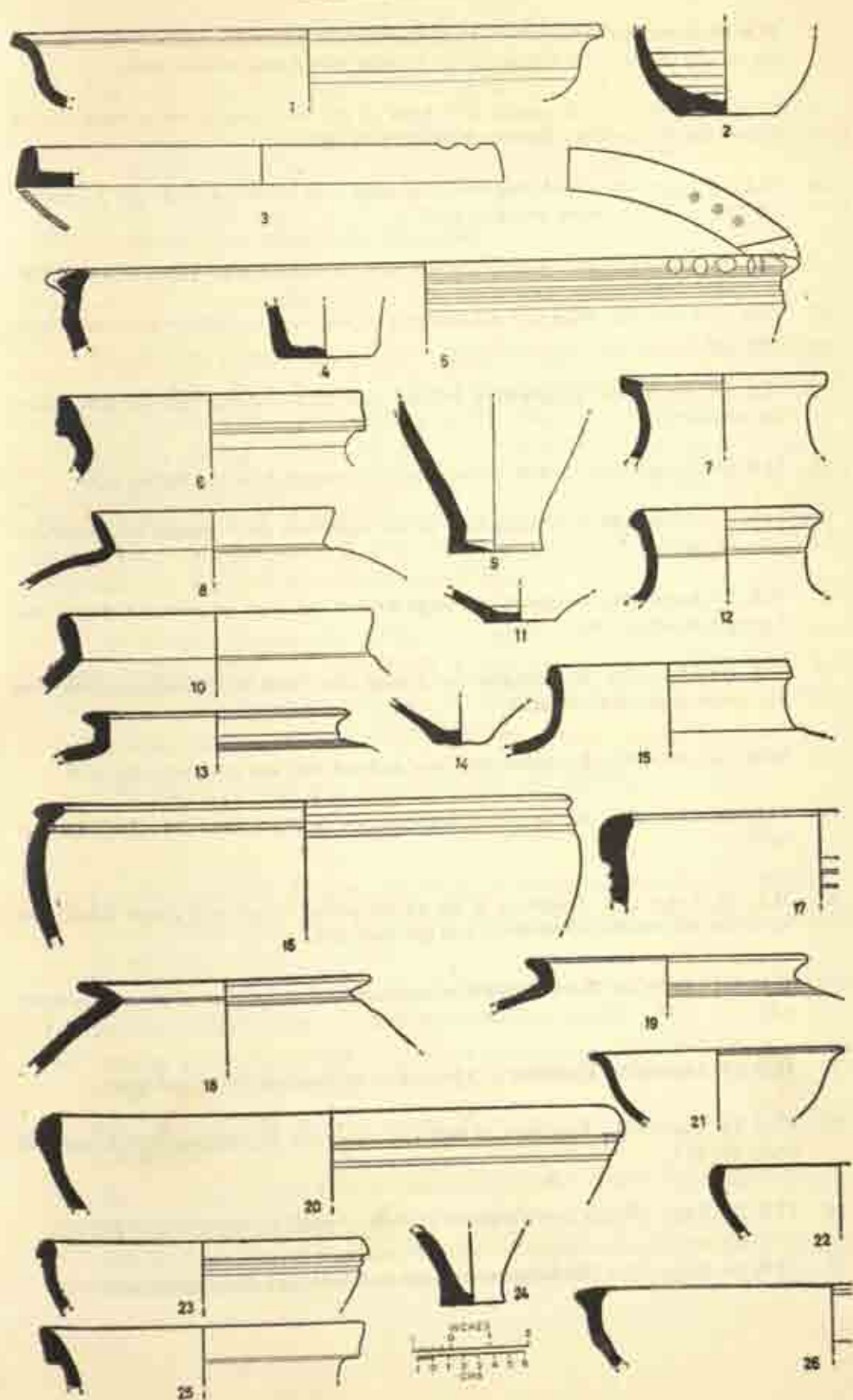


FIG. 25. Pottery of period II-A, layers (41), (40) & (39).

8. TLB, IB, Layer (41): Fragment of a vessel of red ware with carinated neck and a featureless out-curved rim. It is treated on the exterior with a light-reddish wash.
9. TLB, IB, Layer (41): Fragment of a bowl of red ware having string marks at the bottom and flaring sides. The outer surface is rough.
10. TLB, IA, Layer (40): Neck-fragment of a vessel with carinated neck and featureless rim. It is of dull-red ware unevenly-fired.
11. TLB, IB, Layer (39) Pit: Base of a small bowl of dull-red ware and of coarse fabric.
12. TLB, IA, Layer (40): Neck of a water-pitcher of pale-red ware with an externally-thickened rim.
13. TLB, IA, Layer (39): Fragment of dull-red ware with a beaked rim and grooved on the shoulder.
14. TLB, IA, Layer (39C): A bowl of red ware with uneven base and flaring sides.
15. TLB, IA, Layer (39C): Straight neck of red ware with an externally-thickened and collared rim.
16. TLB, IA, Layer (40): Fragment of a large bowl of red ware, grooved at the neck and having a nail-head rim.
17. TLB, IB, Layer (39): Neck-fragment of a large vessel with an externally-collared rim and deeply grooved at the neck.
18. TLB, IA, Layer (40): A splayed-out rim of dull-red ware and grooved at the neck.
19. TLB, IA, Layer (39): A fragment of dull-red ware with a beaked rim and grooved at the rim.
20. TLB, IB, Layer (39): Fragment of an unevenly-fired vessel with coarse fabric and having an externally-thickened rim and grooved neck.
21. TLB, IA, Layer (39): Bowl fragment of red ware with an out-curved rim and concave sides.
22. TLB, IA, Layer (39): Fragment of a bowl with an incurved rim of red ware.
23. TLB, IA, Layer (39): Fragment of dark-red ware with an externally-thickened and under-cut rim.
24. TLB, IA, Layer (39): A bowl-fragment of dull-red ware. (Compare No. 9 above.)
25. TLB, IA, Layer (39): Neck-fragment of red ware with an externally-thickened rim.

26. TLB, IA, Layer (39): A bowl-fragment of red ware with a nail-head rim.

The following specimens are also included in this period:

- (i) TLB-336, IA, Layer (41), Pl. XI, No. 1: A complete bowl of red ware, well-fired with flat base, an incurved sharp rim and corrugated sides.
- (ii) TLB-373, III, Layer (27), Pl. XII-A, No. 6: A small vase of red ware with a carinated, fired shoulder and flaring rim.

POTTERY OF PERIOD II-B

The pottery from layers (28) to (36) in Trench TLB-I, showed some new types as on Fig. 26, Nos. 9, 17 and 13 but a few could be compared with those of period II-A; for example Fig. 26, No. 16 is comparable with that of period II on Fig. 25, No. 18 and with period II as on Fig. 23, No. 22. The necks of water-pitchers appearing in period IIB, Fig. 26, Nos. 4 and 6 are comparable with those of period II-A, Fig. 25, Nos. 12 and 7, respectively. Pans with an incurved and nail-head rim on Fig. 26, No. 3 can be equated with Fig. 25, No. 16 of period II-A.

The levels belonging to period II-B marked the end of the impressed design, characteristic of periods II-A and II. A few designs painted in black and other specimens stamped on the exterior surface with a circular or diamond motif appeared in period II-B.

The selected specimens are described as follows:—

FIG. 26 (Period II-B)

1. TLB, IA, Layer (38): Fragment of a large pan with carinated neck and thick rim.
2. TLB, IA, Layer (28): Neck-fragment of red ware with an out-curved and obliquely-cut rim and carinated at the neck.
3. TLB, IA, Layer (38): A bowl-fragment of red ware, well-fired, with an externally-grooved incurved rim. It is treated on the inner side with reddish wash.
4. TLB, IB, Layer (38): A neck-fragment of a water-pitcher of red ware with well-fired straight neck and externally-thickened rim. It has a thin profile at the shoulder.
5. TLB, IB, Layer (38): A bowl-fragment of red ware with an externally-thickened and collared rim.
6. TLB, IA, Layer (36): A neck of a water-pitcher with an externally-thickened rim and grooved at the shoulder.
7. TLB, IB, Layer (38): A fragment of a large vessel with an incurved rim and grooved at the shoulder. It is of red ware and has coarse fabric.

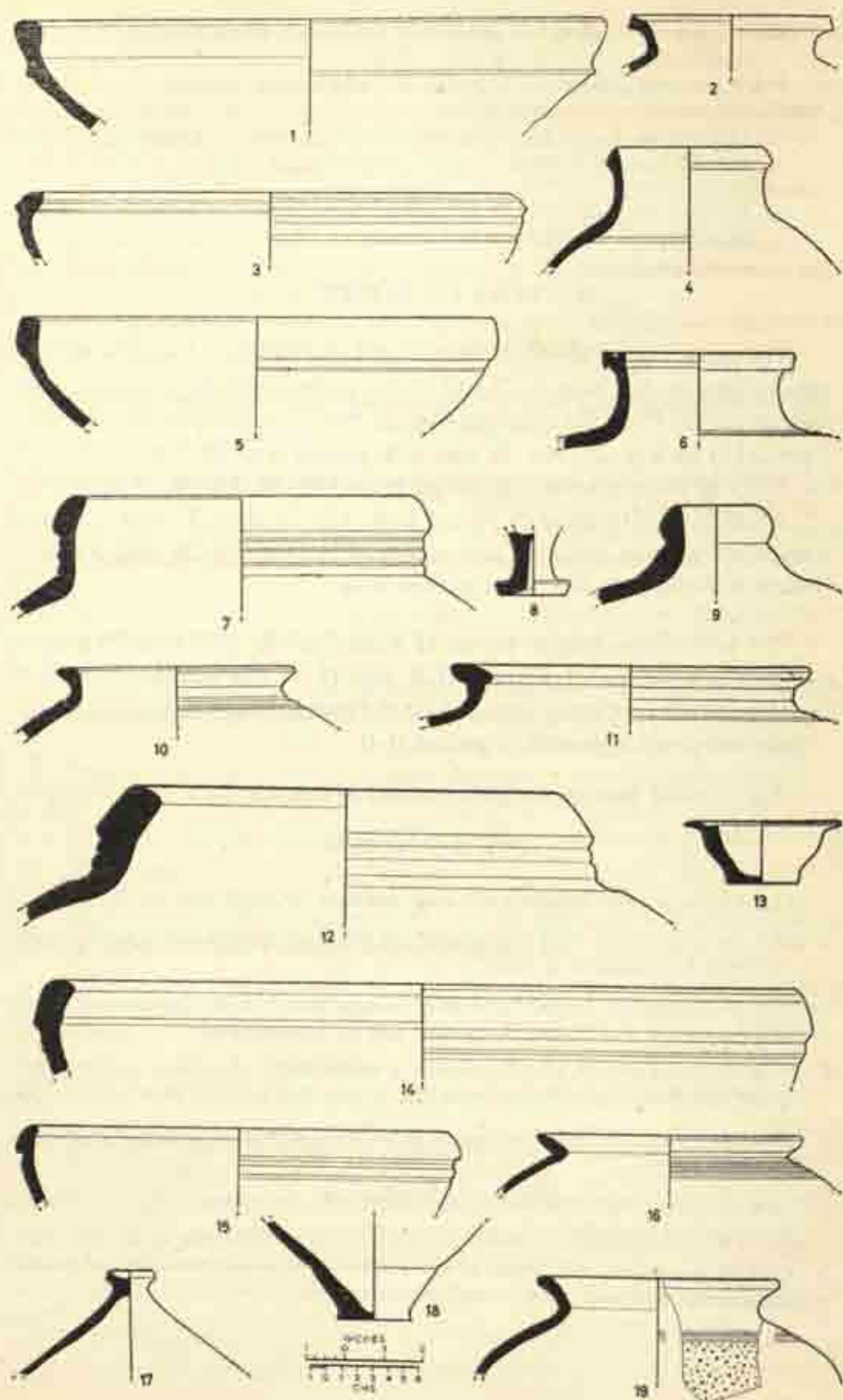


FIG. 26. Pottery of period II-B, layers (38), (37) & (36).

8. TLB, IB, Layer (38): A fragment of a hollow pedestal of dull-red ware.
9. TLB, IA, Layer (38): Fragment of a jar of pale-red ware, unevenly-fired, coarse fabric and externally-thickened rim.
10. TLB, IB, Layer (38): A fragment of red ware with a beaked rim and grooved on the shoulder.
11. TLB, IB, Layer (38): A neck-fragment of red ware with a nail-head rim and grooved at the shoulder and neck.
12. TLB, IA, Layer (37): A thick fragment of a jar of pale-red ware with an externally-thickened closing rim and prominently grooved at the neck.
13. TLB, IB, Layer (36): A lid or jar cover of light-red ware, treated on the lip with bright red slip.
14. TLB, IA, Layer (36): A fragment of the neck of a large vessel of light-red ware with an externally thickened incurved rim.
15. TLB, IA, Layer (36): A fragment of a large bowl of red ware, well-fired and having externally-thickened rim.
16. TLB, IA, Layer (36): A splayed-out rim of a vessel with carinated neck and a series of grooves on the shoulder. It is of red ware and shows fine fabric.
17. TLB, IA, Layer (36): A jar cover or lid of red ware, thin fabric, well-fired and treated on the exterior with light-reddish wash.
18. TLB, IA, Layer (38): A bowl-fragment with a disc base and flaring rim, carinated in the middle.
19. TLB, IA, Layer (36): A fragment of a vessel of red ware with an out-curved rim and grooved at the neck. It has a rough exterior surface.

The levels belonging to period II-B also yielded the following specimens:—

- (i) TLB-273, IB, Layer (38): Pl. XI, No. 7: A miniature lid with a narrow bottom and splayed-out rim, flat on the top. It is treated on the external surface with reddish wash.
- (ii) TLB-277, IB, Layer (38): Pl. XXV, No. 1: A complete incense burner with shallow pedestal base and an externally-thickened sharp rim, having a vertical handle decorated with incised lines on the exterior.
- (iii) TLB, III, Layer (25): Pl. XII-A, No. 1: A small globular vase of pale-red ware with a short neck and flaring featureless rim. It has an uneven outer surface and is treated with thick wash.

FIG. 27 (Decorated Pottery of Period II-A)

1. TLB, IB, Layer (41): Fragment of a vessel of red ware with an out-curved featureless rim and a thick profile on the shoulder. It is treated on the outer surface with light-red dish wash and decorated with a 'V'-shaped design and notches below.
2. TLB, IB, Layer (41): Fragment of red ware, decorated on the shoulder with an impressed clamp (?) design.
3. TLB, IB, Layer (41): A potsherd with a rough exterior surface showing a cordoned and rope design. It is of deep-red ware and has finger marks on the interior.
4. TLB, IB, Layer (41): Pl. XIV, No. 8: Fragment of red ware, well-fired and decorated on the shoulder with an impressed 'S'-shaped design.
5. TLB, IB, Layer (41): Pl. XIV, No. 11: A potsherd of light-red ware, impressed with a circular design connected by inverted loops.
6. TLB, IB, Layer (41): A potsherd of dull-red ware impressed with a circular floral design.
7. TLB, IB, Layer (41): A ledged-piece of red ware decorated on the junction of the shoulder and lower part with vertical strokes.
8. TLB, IA, Layer (40): A thick piece of red ware, impressed with a looped design made of squares.
9. TLB, IB, Layer (41): A perforated piece of red ware.
10. TLB, IA, Layer (40): A well-fired piece of red ware impressed with a wheel-design and treated on the outer surface with mica dust.
11. TLB, IB, Layer (40): A potsherd of dull-red ware treated on the surface with buff wash and impressed with oblique designs.
12. TLB, IA, Layer (40): Pl. XIV, No. 10: A thin piece of red ware impressed with roughly made diamond motifs.
13. TLB, IA, Layer (40): A piece of red ware with an applied finger-tipped cordon.
14. TLB, IB, Layer (40): A thin piece of dull-red ware impressed with an unidentified motif.
15. TLB, IB, Layer (40): A potsherd of dull-red ware impressed with a floral design.
16. TLB, IB, Layer (40): A piece of dull-red ware treated on the outer surface with wash and impressed with an inverted loop design.
17. TLB, IA, Layer (39C): A piece of red ware showing incised lines and circular motifs.

EXCAVATIONS AT TULAMBA

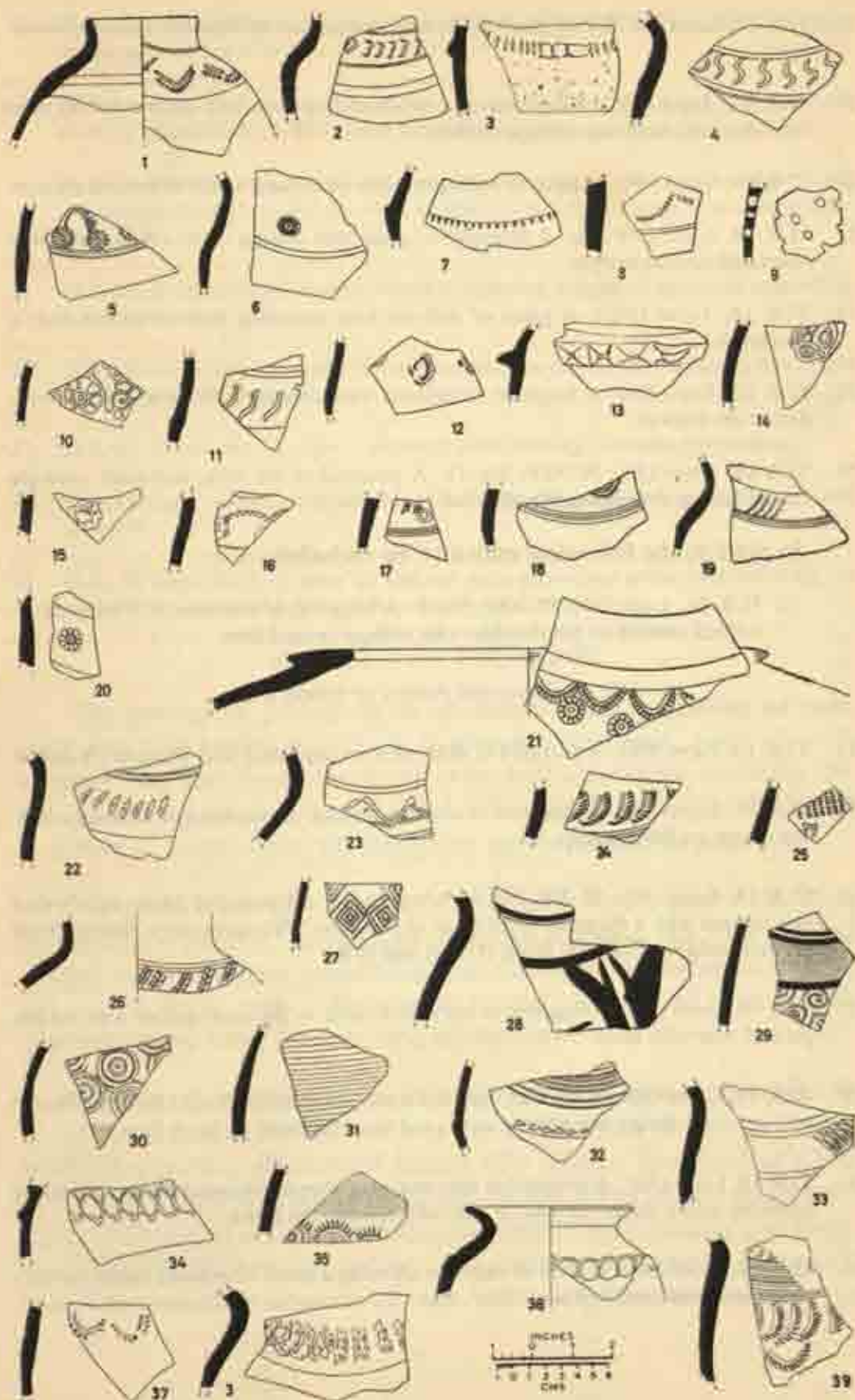


FIG. 27. Decorated ware of periods II-A & II-B.

18. TLB, IA, Layer (39C): Fragment of a vessel depicting on the shoulder a rayed circular motif.
19. TLB, IA, Layer (39C): Fragment of a vessel of red ware with an out-curved rim, fine fabric and depicting oblique strokes.
20. TLB, IA, Layer (39): A piece of light-grey ware with floral motifs impressed on it.
21. TLB, IB, Layer (39)—Pit: A fragment of a jar with closing under-cut rim showing loops and circular designs.
22. TLB, IA, Layer (39C): A piece of dull-red ware depicting lines or strokes with a circular dot.
23. TLB, IA, Layer (39): A fragment of pale-red ware showing a 'V'-shaped design with dots at the bottom.
24. TLB, IA, Layer (39): Pl. XIV, No. 12: A potsherd of red ware, well-fired, showing curved designs resembling the palm leaf.

In the list, the following may also be included:

- (i) TLB, IA, Layer (41): Pl. XIV, No. 9: A fragment of red ware, well-fired, thick-bodied, treated on the shoulder with oblique incised lines.

FIG. 27 (Decorated Pottery of Period II-B)

25. TLB, IA, Layer (38): A potsherd of dull-red ware impressed with a screen (?) design.
26. TLB, IB, Layer (38): A fragment of a vessel with an out-curved rim showing a leaf-like design on the shoulder.
27. TLB, IA, Layer (38): Pl. XV, No. 5: A fragment of red ware fine fabric, thin-bodied and stamped with a diamond motif made of four lines. This specimen is different from the impressed ware of early levels II, II-A and II-B.
28. TLB, IB, Layer (38): A fragment of red ware treated on the outer surface with red slip painted over with black.
29. TLB, IA, Layer (38): A piece of light-red ware, stamped (as distinct from impressed) with a volute design and painted with a red band bordered by black lines.
30. TLB, IB, Layer (36): A potsherd of deep-red ware showing stamped designs consisting of circles with a dot in the middle and red band painted below.
31. TLB, IB, Layer (38): A piece of red ware showing a series of grooves on the exterior and treated with dark-red slip.

32. TLB, IA, Layer (36): A piece of dull-red ware depicting an impressed triangular design and a series of grooves.
33. TLB, IA, Layer (38): A piece of red ware treated on the outer surface with wash and showing unidentified curved strokes and grooves.
34. TLB, IA, Layer (36): A piece of red ware having a rough interior surface and depicting a thumb-impressed oval design on the cordon at the junction of the shoulder and the lower part.
35. TLB, IA, Layer (38): A piece of red ware depicting a stamped sun motif over which runs a band of red colour.
36. TLB, IB, Layer (36): A vessel of red ware with an out-curved rim and finger-tipped cordon below the shoulder.
37. TLB, IA, Layer (36): A piece of dark-red ware showing loop and dot designs.
38. TLB, IA, Layer (36): A fragment of red ware showing unidentified designs impressed vertically.
39. TLB, IB, Layer (36): A piece of dull-red ware showing a series of grooves on the shoulder with leaf and looped designs impressed over it.

POTTERY OF PERIOD III

The pottery of period III is of varied types, consisting of both thick and thin-bodied vessels. It is generally well-fired, made of well-levigated clay and shows fine fabric. Although some types, as on Fig. 29, No. 13 and Fig. 28, No. 2 were comparable with Fig. 21, Nos. 21 and 17 of period II, respectively, yet many new types appeared in period III.

The painted pottery occurred in great profusion in period III which was absent in periods I to IIA and very rare in period IIB. The painted designs occurred either immediately on the body of the vessel or over red slip in black colour. The designs consist of groups of parallel lines, triangles, loops, cross hatching and zigzag lines.

The pottery stamped with a large variety of designs on the shoulder of the vessel formed the hall-mark of period III. Since this pottery with a bewildering variety of stamped designs (the selected specimens of which are illustrated on Fig. 30 and Fig. 32 and on Pls. XV to XXIII) was recorded for the first time at Tulamba, it was designated "Tulamba Stamped Ware" to distinguish it from the pottery with impressed designs of periods II and II-A, and in the absence of any other suitable terminology. The

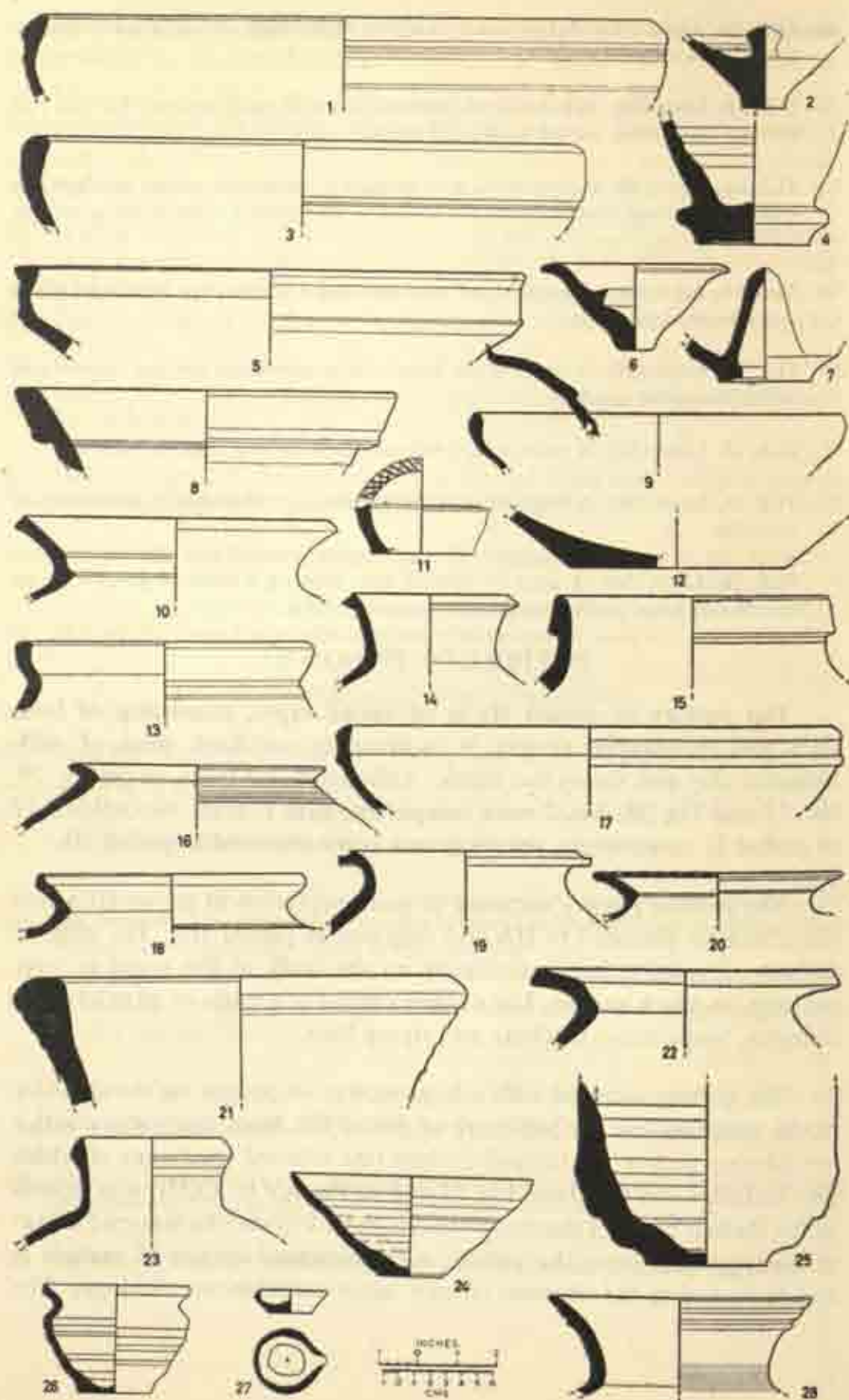


FIG. 28. Pottery of period III from layers (35) to (29).

designs on "Tulamba Stamp Ware" consist of, to mention only few, volutes, squares, diamonds, wheels, circles, eyes, ducks, human faces and elliptical and wavy designs. These are usually decorated with rays around the outer edge or small dots within or outside a motif. On many specimens, the designs overlap one another and thus are only partially visible because of irregular stamping. No stamp was found, but seeing the irregularity of designs and their overlapping on different parts of the shoulders, it is unlikely that "Tulamba Stamp Ware" was moulded. The ware is generally made of well-levigated clay and is extremely hard. In the early levels of period III, mica was dusted on the stamp designs, but its use gradually decreased during periods IV and V.

The selected specimens from layers (35) to (23) are described as follows:—

FIG. 28 (Period III)

1. TLB, IB, Layer (35): Fragment of a large pan of dull-red ware with an externally-thickened and incurved rim.
2. TLB, IA, Layer (35): A fragment of a knobbed-bowl of red ware with thick base and grooved internally.
3. TLB, IB, Layer (35): Fragment of a large pan of red ware with an incurved rim and grooved at the lower part.
4. TLB, IB, Layer (35): Fragment of light-red ware with cordoned-base and flaring sides.
5. TLB, IA, Layer (35): Fragment of a large pan of red ware well-fired, of fine fabric and with nail-head rim.
6. TLB, IA, Layer (35): A lid of dull-red ware with a flaring rim and carinated internally.
7. TLB, IA, Layer (35): A fragment of a lid of dull-red ware with a hollow conical knob in the middle. It has a disc base and flaring sides.
8. TLB, IB, Layer (35): Fragment of deep-red ware with an externally-collared rim. It is treated on both sides with wash.
9. TLB, IB, Layer (35): Fragment of a bowl (?) of light-red ware with thickened rim.
10. TLB, IA, Layer (35): A neck-fragment of pale-red ware with an out-curved featureless rim.
11. TLB, IB, Layer (35): A fragment of cup of dull-red ware treated on the rim with crossed incised lines.

12. TLB, IB, Layer (35): A fragment of large bowl of red ware with a flat base and flaring sides.
13. TLB, IB, Layer (35): Fragment of deep-red ware with slightly incurved rim.
14. TLB, IA, Layer (33): A neck-fragment of a water-pitcher with an externally-thickened beaked rim.
15. TLB, IB, Layer (35): A neck-fragment of a jar of red ware with an externally-thickened collared rim.
16. TLB, IA, Layer (34): Fragment of a cooking vessel of red ware with an out-curved but internally carinated rim. It is grooved on the shoulder.
17. TLB, IA, Layer (33): Fragment of a large pan of red ware with an externally-thickened and cordoned rim.
18. TLB, IA, Layer (33): Fragment of a vessel with an out-curved and internally-grooved rim. It is of dull-red ware and grooved on the neck.
19. TLB, IA, Layer (33): A neck-fragment of a water-pitcher with an out-curved rim horizontally-grooved on top.
20. TLB, IB, Layer (31): A neck-fragment of red ware, well-fired and treated on the inner surface with red slip over which painted designs occur in black. This type is also recorded in layers (29) and (27).
21. TLB, IA, Layer (33): A thick fragment of a vessel, of red ware, with externally-thickened and grooved rim.
22. TLB, IB, Layer (31): A neck fragment of dull-red ware, well-fired and treated on the outer and inner surfaces with reddish wash. It has an out-curved rim and an internally-carinated neck.
23. TLB, IB, Layer (33): An almost vertical neck of dull-red ware with externally-thickened and grooved rim. This type also occurs in layer (27).
24. TLB, IC, Layer (31): A bowl of red ware with disc base and flaring corrugated sides. The type was also recorded in layer (29).
25. TLB, IB, Layer (31): A thick fragment of a cylindrical vessel of red ware, well-fired, with a disc base and straight internally-grooved sides.
26. TLB, 241, IB, Layer (30): A small vase of dull-red ware with flat base and corrugated profile and out-curved featureless rim.
27. TLB, 231, IB, Layer (29): A small earthenware oil lamp of red ware with incurved sides.

28. TLB, IB, Layer (30): A neck-fragment with a flaring rim. It is externally-grooved and painted on the neck with a red band.

FIG. 29 (Period III)

1. TLB, IB, Layer (29): A neck-fragment of a large vessel of deep-red ware with an out-curved nail-head rim.
2. TLB, IB, Layer (29): A fragment of red ware with an out-curved internally-beaked rim.
3. TLB, IA, Layer (29): An over-fired piece of red ware with an internally-bevelled straight rim and cordoned, shows a series of grooves and obliquely-incised lines.
4. TLB, IB, Layer (29): A fragment of light-red ware with an internally-carinated neck and an out-curved rim externally-thickened.
5. TLB, IB, Layer (29): A lid or red ware with an internally-carinated and flaring rim. This type also occurs in layers (27A) and (26).
6. TLB, IB, Layer (29): A neck-fragment of a water-pitcher with an out-curved and grooved rim. This type also occurs in layers (27A) and (27).
7. TLB, IB, Layer (29): A fragment of dull-red ware with an internally-carinated neck and out-curved rim.
8. TLB, IB, Layer (28): A painted fragment of a neck with an out-curved externally-thickened rim, showing painted triangle internally and horizontal lines in black, around the neck. This type also occurs in layer (29).
9. TLB, IB, Layer (27A): Fragment of a bowl of red ware with a flat base.
10. TLB, IB, Layer (28): A neck-fragment with an out-curved nail-head rim, externally-cordoned and grooved round the neck. Triangular notches appear on the cordon.
11. TLB, IA, Layer (27): A thick fragment of a vessel with flaring rim grooved externally.
12. TLB, IA, Layer (27): Fragment of a vessel of red ware, well-fired with an out-curved, externally-thickened and notched rim.
13. TLB, IA, Layer (26): A conical base of a vessel of red ware with rough sandy mud applied externally.
14. TLB, IA, Layer (26): Fragment of a lid of red ware with heavy thick base which is internally carinated. It is a well-fired piece.
15. TLB, IA, Layer (25): Fragment of a bowl of light-red ware with featureless rim.
16. TLB, IA, Layer (25): Fragment of a miniature vase with carinated-neck and an out-curved featureless rim.

EXCAVATIONS AT TULAMBA

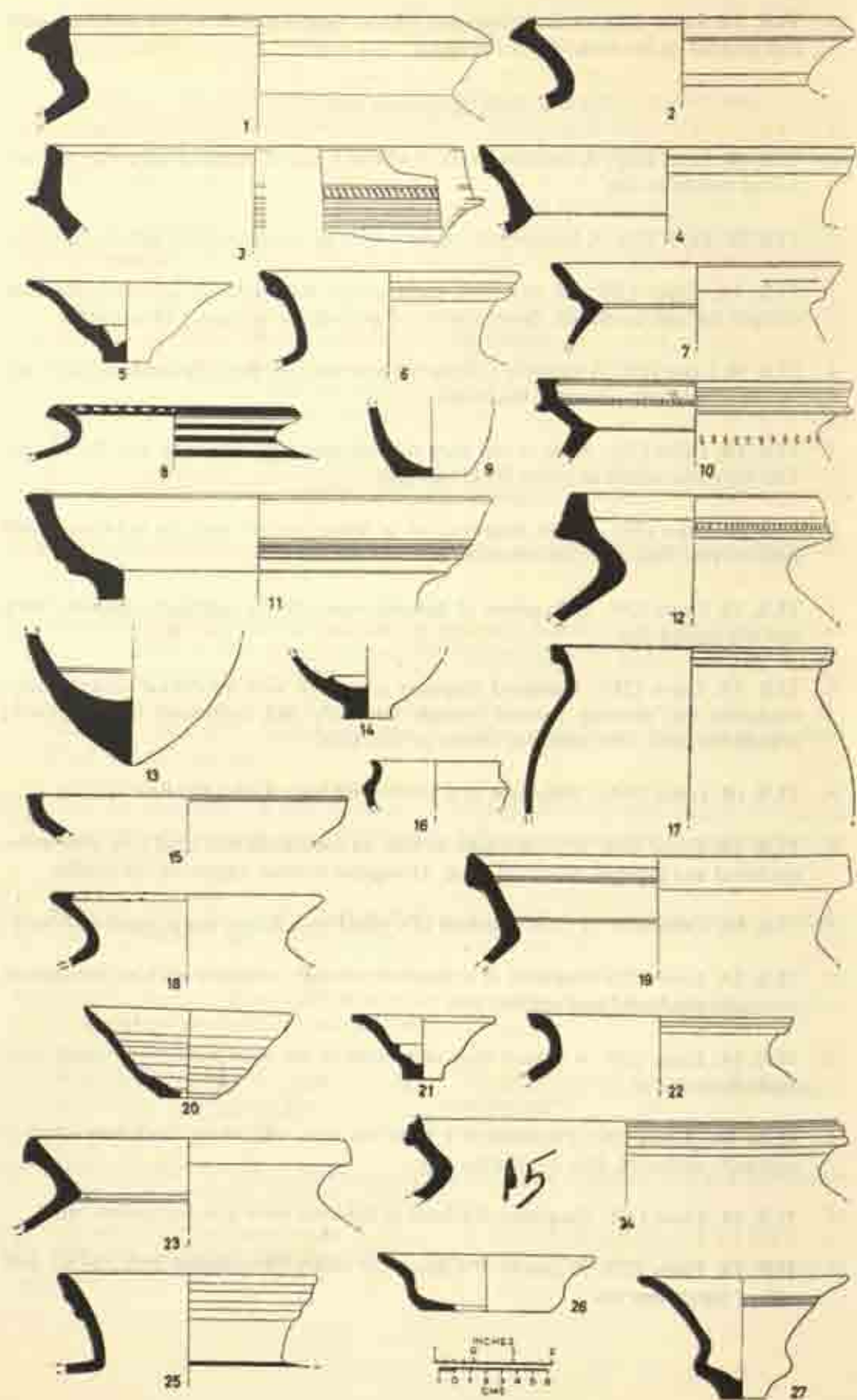


FIG. 29. Pottery of period III from layers (29) to (23).

17. TLB, IA, Layer (25): Fragment of an elliptical vessel with an externally-collared and grooved rim. It is of red ware, well-fired and has a fine fabric. The outer surface is made rough by dusting with sand.
18. TLB, IA, Layer (25): A neck-fragment of deep-red ware with an internally-beaked rim.
19. TLB, IA, Layer (25): A neck-fragment of a large vessel with an externally-thickened and under-cut rim. It is of light-red ware.
20. TLB, IA, Layer (24): A bowl of red ware with a flat base and flared corrugated sides. It has a featureless rim.
21. TLB, 150, IA, Layer (23): A small lid of dull-red ware, with flaring sides and a featureless rim. It is internally carinated. This type is also recorded in layer (24).
22. TLB, IB, Layer (24): Fragment of a dull-red ware with an out-curved and externally-thickened rim.
23. TLB, IA, Layer (23): A carinated-neck of red ware with an out-curved under-cut rim.
24. TLB, IA, Layer (23): Fragment of a large vessel of red ware with an out-curved externally-grooved and collared rim.
25. TLB, IB, Layer (23): A neck-fragment of red ware with an externally-thickened and grooved rim.
26. TLB, IB, Layer (23): A small dish or cup of deep-red ware with a flat base and flaring rim. It is treated on the inner surface with bright-red slip.
27. TLB, IA, Layer (23): A lid of light-red ware with a thick base and flaring sides.

The following complete specimens of pottery are also illustrated:

- (i) TLB-214, IB, Layer (24): Pl. XII-A, No. 5: A small vase (inkpot?) of red ware with a globular body, flat base and flaring rim.
- (ii) TLB-33, II, Layer (5): Pl. XII-B, No. 1: A small vase of dull-red ware with a globular but externally-grooved body and flaring rim. This pot contained a necklace of semi-precious beads with a silver pendant (see below, pp. 108-9).
- (iii) TLB-241, IB, Layer (30): Pl. XII-B, No. 4: A small vase of red ware with an internally-carinated neck and an externally-thickened flaring rim. It is treated on the outer surface with light-red wash.

FIG. 30 (Decorated Wares of Period III)

1. TLB, IA, Layer (35): Pl. XV, No. 1: A potsherd of red ware fine fabric, well-fired, the external surface stamped with multiple square design with a dot in the middle. It is also painted with black over red slip. The stamped part of the potsherd shows mica dust.



FIG. 30. Decorated ware of period III.

This design first appeared in layer (36) and continued in layers (30) to (27), (23), (15) and (13). In layer (34), the number of circles is two while in layer (22) the rings are very sharp.

2. TLB, IB, Layer (35): A potsherd of red ware, the exterior surface stamped with a volute design between red bands. A similar design has been recorded in layers (27A) and (24).
3. TLB, IB, Layer (35): A potsherd of red ware showing a partly visible floral design and triangular notches respectively in the upper and lower part of the multiple grooves.
4. TLB, IA, Layer (35): XXIII, No. 8: (Upside down): A potsherd of dull-red ware treated on the exterior with deep-red slip and showing floral design connected with wavy lines in relief.
5. TLB, IA, Layer (34): A potsherd of dull-red ware showing multiple grooves and a crescent-shaped stamped design.
6. TLB, IA, Layer (34): A potsherd of red ware depicting multiple squares and parallel black lines painted on red slip.
7. TLB, IA, Layer (34): A piece of deep-red ware showing an elongated diamond design with vertical strokes at the bottom resembling rays.
8. TLB, IB, Layer (32): A piece of red ware of fine fabric. The external surface shows dusting of mica over which circular designs are stamped. The red band runs above the motifs.
9. TLB, IB, Layer (31): A fragment of light-red ware depicting a three-lined diamond motif and a wide red band painted above.
10. TLB, IB, Layer (31): A piece of red ware with an unidentified linear and circular design stamped on it.
11. TLB, IB, Layer (30): A piece of light-red ware treated on the exterior with red slip and stamped with a circular design consisting of three rings and rays on the outer edge. It has a small circle in the middle instead of a dot, as distinct from No. 1 above.
12. TLB, IB, Layer (29): Pl. XV, No. 2: A fragment of dull-red ware stamped with a spoked-wheel motif on the buff slip. The external surface over the stamped design is coated with mud mixed with mica. It shows a wide red band painted above. This design also occurred in layers (31A) and in (24) where it appeared with a dot in the middle.
13. TLB, IB, Layer (29): Pl. XV, No. 3: A fragment of light-red ware showing a stamped design consisting of four small squares filled in with dots and arranged around a circle. The exterior is dusted with mica.
14. TLB, IB, Layer (29): A fragment of red ware depicting two circles around the dot, one of which shows triangular notches depicting, perhaps, rays in the lower part. This design was also recorded from layer (25).

15. TLB, IB, Layer (29): A potsherd of light-red ware showing a zigzag line painted between two black lines and red band above. The lower part shows designs consisting of two-lined squares with a circle in the middle. The stamped portion of the potsherd is dusted with mica. A similar design also appeared in layer (26).
16. TLB, IB, Layer (29): A piece of pale-red ware, stamped with continuous design of wavy line and a black thick line painted on red slip. A similar design but without the painting, was recorded in layer (27) also.
17. TLB, IB, Layer (29): A potsherd of red ware with stamped designs each consisting of three circles and small dots in between the outer two rings. The design continued upto layer (27).
18. TLB, IB, Layer (29): Fragment of red ware depicting a rectangular design and with a dot in the middle. Its surface is dusted with mica.
19. TLB, IB, Layer (27A): A potsherd of red ware depicting a circular design each having four dots in the middle.
20. TLB, IB, Layer (27A): A fragment of red ware depicting a design similar to that of No. 19 but it has three dots in the middle and the outer ring is also dotted.
21. TLB, IA, Layer (27): Fragment of pale-red ware showing two circles around a dot the outer being connected with rays.
22. TLB, IA, Layer (26): A potsherd of light-red ware showing a stamped circular design with red and black bands painted above.
23. TLB, IB, Layer (26): A fragment of dull-red ware showing circular designs as in No. 20 above but with five dots in each instead of three and the outer edge is rayed.
24. TLB, IB, Layer (25): A piece of red ware showing an oval-shaped and rayed design with dot in each.
25. TLB, IB, Layer (25): A fragment of deep-red ware showing rayed circles with a cross in the middle and having a dot in each compartment.
26. TLB, IA, Layer (25): A fragment of red ware showing rayed circles and a black line painted above.
27. TLB, IA, Layer (24): Pl. XV, No. 13: A fragment of dull-red ware showing a row of spoked-wheels stamped below a wavy line painted in black and bordered by two black lines. The stamped design is dusted with mica. This design was also recorded in layer (I) pit.
28. TLB, IA, Layer (23): Pl. XV, No. 14: A potsherd of pale-red ware depicting a stamped design consisting of two circles around a large circular dot in relief and the exterior edge is decorated with series of small dots.

In layer (27), a design showed prominent rays and a profusion of mica dusted over it but in (26) the lines became heavy and thick. In layers (21) and (20), the rays around the motif became prominent and sharp. In layer (17) no rays were indicated around outer edge.

29. TLB, IB, Layer (23): A potsherd of red ware showing an elongated diamond motif consisting of multiple lines.
30. TLB, IB, Layer (23): PL XV, No. 12: A fragment of pale-red ware showing a connected diamond motif enclosing a dot.
31. TLB, IB, Layer (28): A potsherd of red ware treated on the exterior surface with red slip and painted with black parallel and oblique lines.
32. TLB, IB, Layer (32): A carinated-fragment of deep-red ware, treated on the exterior with red slip over which triangular and parallel lines are painted in black.
33. TLB, IB, Layer (31): A fragment of red ware with an out-curved rim, painted on the inner side in black while two parallel red lines run round the neck.
34. TLB, IB, Layer (28): A piece of red ware painted with a crossed triangular design in black.
35. TLB, IB, Layer (23): A fragment of dull-red ware showing a volute design stamped on the shoulder between black painted parallel lines.
36. TLB, IA, Layer (23): A potsherd of pinkish-red ware stamped with a circular design. Between black parallel lines, three lines in black are painted obliquely over the stamped design.
37. TLB, IA, Layer (27): A fragment of dull-red ware painted with black arched design on red slip.
38. TLB, IB, Layer (28): A piece of dull-red ware treated on the exterior with red slip over which crossed lines are painted between parallel lines.
39. TLB, IA, Layer (27): A piece of red ware treated on the outer surface with red slip over which crossed triangular and other designs are painted in black.
40. TLB, IB, Layer (26): A fragment of a vessel of light-red ware showing an internally-carinated neck and an out-curved rim painted in black.
41. TLB, IB, Layer (24): A piece of pale-red ware depicting an arched motif in black painted between two parallel lines.
42. TLB, IB, Layer (27): A piece of dull-red ware, painted with black colour on red slip consisting of an elongated triangular motif with a zigzag line above.

The following specimens, also from layers belonging to period III, were selected for illustration:—

- (i) TLB, IA, Layer (27): Pl. XV, No. 4: A potsherd of red ware showing a circular stamped design, the outer circle of which is dotted. Similar designs, with mica dusted over them were also recorded in layer (29) but in layer (27A) there are three dots in the middle with a dusting of mica. A similar design, consisting of two rings only, appeared in layer (27B).
- (ii) TLB, IA, Layer (26): Pl. XV, No. 6: A potsherd of red ware showing a square motif and with mica dusted over the external surface. In layer (20) a motif made of three lines was recorded.
- (iii) TLB, IA, Layer (25): Pl. XV, No. 7: A potsherd of light red ware showing a design in relief within a circle. This design seems to have developed upto the period of layer (23) with dots around the outer circle and having double instead of a single ring.
- (iv) TLB, IA, Layer (25): Pl. XV, No. 9: A fragment of red ware, well-fired and showing wheel design with multiple spokes and small circles in the middle. The outer surface is dusted with mica. It is painted above with a wavy line bordered by two indistinct lines in black.
- (v) TLB, IA, Layer (25): Pl. XV, No. 10: A potsherd of red ware, well-fired and showing a stamped design consisting of circles with a cross in the middle. It is painted below with a wavy line between two horizontal black lines. From layer (23) a similar design with small rays on the outer edge was recorded.
- (vi) TLB, IB, Layer (24): Pl. XV, No. 11: A potsherd of dark-brown ware unevenly-fired and showing deeply-stamped designs consisting of two circles. In layer (18), a similar motif with crudely-drawn lines of the circles was found.
- (vii) TLB, II, Layer (6): Pl. XXII, No. 9: A fragment of deep-red ware, stamped on the exterior surface with a double-line circular motif. The outer edge is decorated with rays. The external surface of the potsherd is treated with a dusting of mica. It is of fine fabric and well-fired.
In the main Trench TLB-I, this design starts from layer (30A) where three circles, instead of two, are represented. From layers (27A) and (27), three circles with a dusting of mica, as on this potsherd, were recovered. In layers (26) and (25) rays as well as mica dusting occurred while in layer (22) there were four circles instead of two or three, the outer edge of which was ornamented with small rays.
- (viii) TLB, IB, Layer (35): A potsherd of grey ware, polished on the external surface and incised with a group of obliquely-drawn lines. It is a rare specimen.

POTTERY OF PERIOD IV

In period IV, "Tulamba Stamped Ware" continued to appear with painted specimens. Many types of undecorated plain ware could be compared with those of period III, such as oil lamps of Fig. 31, No. 3 with Fig. 28,

No. 27; knobbed lids of Fig. 31, No. 25 with Fig. 28, No. 2; lids with internal carination of Fig. 31, Nos. 28 and 16 with Fig. 28, No. 6 and Fig. 29, No. 21; water-pitchers with externally-thickened rim of Fig. 31, No. 13 with Fig. 29, No. 6; splayed-out rims of vessels of Fig. 31, No. 11 with Fig. 29, No. 23 and lids or bowls with cordoned-base of Fig. 31, No. 9 with Fig. 28, No. 4. Despite the large number of ceramic types of period IV, which compares very well with those of period III, some pottery types disappeared or were introduced in period IV.

A description of selected specimens follows:—

FIG. 31 (Period IV)

1. TLB, IB, Layer (22): A carinated neck-fragment of a vase with an externally-thickened out-curved rim. It is of red ware, well-fired. This type was also recorded in layers (19) and (21).
2. TLB, IB, Layer (22): Fragment of a water-pitcher with an out-curved and an externally-thickened rim having a horizontal groove on top. It is well-fired and painted red on the neck with a black line below.
3. TLB, 116, IB, Layer (22): An earthenware oil lamp with an incurved featureless rim and convex inside the bottom.
4. TLB, IB, Layer (22): A neck-fragment of red ware with splayed-out rim.
5. TLB, IB, Layer (22): Fragment of red ware with an out-curved externally-thickened rim. It is treated on the outer surface with reddish wash.
6. TLB, IB, Layer (22): Fragment of a vase of dull-red ware with an out-curved externally-thickened and beaked rim notched at the top.
7. TLB, IB, Layer (22): Fragment of a vase of red ware with almost straight sides and an out-curved rim.
8. TLB, IB, Layer (22): A lid or bowl of light-red ware, fine fabric and of well-levigated clay with flaring sides and grooved internally.
9. TLB, IB, Layer (22): A lid of red ware with a carinated thick base and flaring rim. The type also occurred in layer (19) but with a thin body.
10. TLB, IB, Layer (22): A small miniature vase of pale-red ware with an out-curved, internally-thickened rim.
11. TLB, IB, Layer (21): A fragment of red ware with an out-turned and externally-thickened rim. A similar type occurred in layers (19) and (17B).

12. TLB, 1A, Layer (22): A bowl of red ware with flat base and corrugated sides. It has a featureless rim. A similar type of bowl was recovered from layers (18) and (21).
13. TLB, 1B, Layer (22): A ringed-base bowl of red ware with flaring sides. It also occurred in layer (21).
14. TLB, 1B, Layer (21): Fragment of red ware of fine fabric, treated on the outer surface with reddish wash and having a slightly out-curved featureless rim.
15. TLB, 1B, Layer (21): Fragment of a vessel with an out-curved and externally-thickened rim. It is of deep-red ware and was also recorded in layers (19) and (22).
16. TLB, 1B, Layer (21): A lid of deep-red ware, well-fired with internally-carinated sides and flaring rim. A similar type of lids occurred in layers (17A), (17B), (19) and (22).
17. TLB, 1B, Layer (21): A neck-fragment with an internally-thickened out-curved rim and a notched cordon around the neck. It is of red ware and well-fired.
18. TLB, 1B, Layer (21): Fragment of a lid or bowl of pale-red ware with flat base and flaring sides, made of well-levigated clay and having a smooth surface. A series of grooves occurs on the inner side of the bowl.
19. TLB, 124, 1A, Layer (18): A small earthenware oil lamp of dull-red ware with an externally-thickened rim.
20. TLB, 135, 1A, Layer (21): Pl. XII-B, No. 2: A small vase of red ware with carinated shoulder and an out-curved rim. It has a disc base and treated on the outer surface with red wash.
21. TLB, 1B, Layer (19): Fragment of red ware with an externally-thickened collared rim.
22. TLB, 1B, Layer (19): Fragment of red ware with an out-turned rim and grooved on the shoulder.
23. TLB, 1B, Layer (21): A miniature lid with high base and flaring sides. It is of dull-red ware.
24. TLB, 1B, Layer (19): A painted fragment of neck showing the hook design around the shoulder below three black lines painted on red slip.
25. TLB, 1B, Layer (18): A knobbed-lid of red ware with flaring sides, treated on the inner side with red slip.
26. TLB, 117, 1A, Layer (18): A lid of red ware with flaring sides and a thick body.
27. TLB, 1B, Layer (18): A small bowl of red ware, slightly over-fired, with a flat base and flaring sides.
28. TLB, 1A, Layer (28): A thick-bodied lid of red ware of well-levigated clay, well-fired and of fine fabric, having a carination on the inner side and flaring rim.

EXCAVATIONS AT TULAMBA

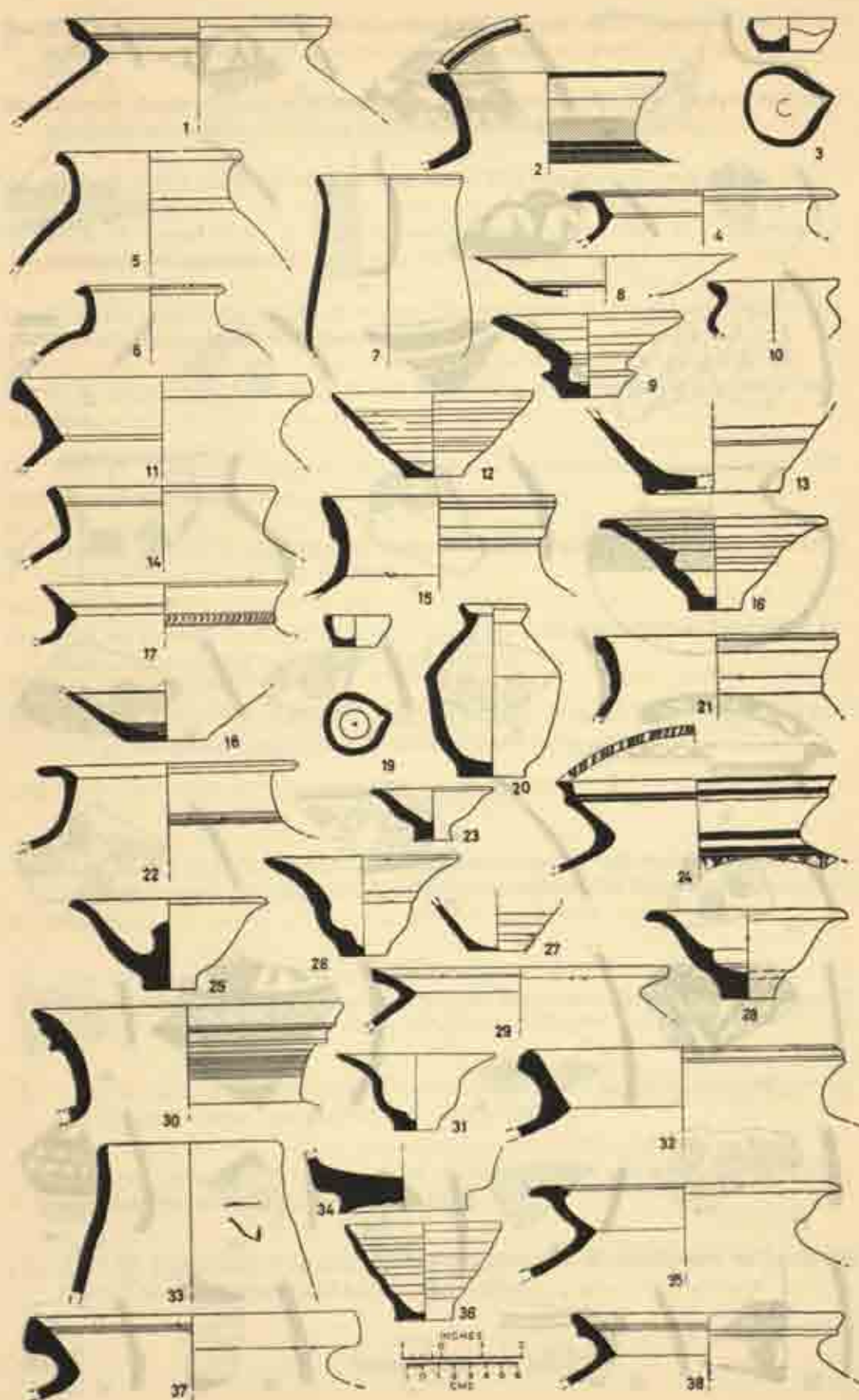


FIG. 31. Pottery of period IV from layers (22) to (17).

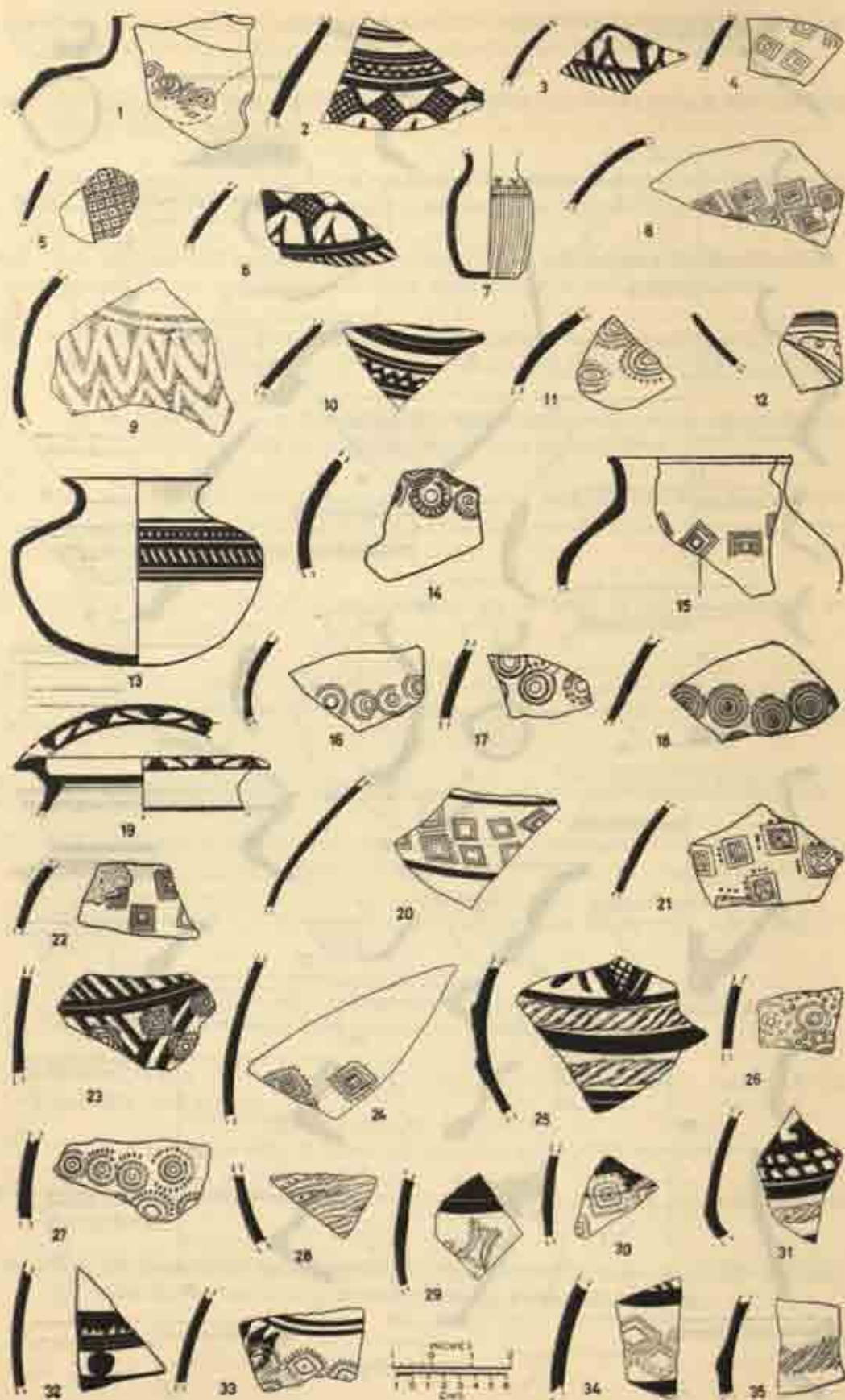


FIG. 32. Pottery of period IV from layers (22) to (17).

29. TLB, IB, Layer (18): Fragment of a vessel with an out-turned featureless rim of red ware.
30. TLB, IA, Layer (18): A neck-fragment of a vessel of deep-red ware made of well-levigated clay and well-fired with an externally-thickened and grooved rim.
31. TLB, IB, Layer (17B): A lid of pale-red ware. This type also occurred in layer (20).
32. TLB, IB, Layer (17A): A carinated neck-fragment of red ware with an externally-thickened and grooved rim.
33. TLB, IB, Layer (18): A piece of a large elliptical vessel of pale-red with a featureless rim. It has rough interior surface.
34. TLB, IB, Layer (17A): A thick-bodied bowl with a ringed-base and of red ware, well-fired.
35. TLB, IB, Layer (17): Fragment of light-red ware of fine fabric with a carinated neck and nail-head rim.
36. TLB, IB, Layer (17): A small bowl of red ware with a slightly conical base and carinated flaring sides. (Compare No. 12 above.)
37. TLB, IB, Layer (17): Fragment of red ware of fine fabric, well-fired with an externally-thickened, out-curved rim. It is grooved internally.
38. TLB, IB, Layer (17): Fragment of red ware made of well-levigated clay, well-fired with an out-curved externally-thickened and internally-grooved rim.

FIG. 32 (Period IV)

1. TLB, IB, Layer (22): Fragment of a spouted vessel of red ware, stamped on the shoulder with volute design having a dot in the middle. The lower edge is connected with rays.
2. TLB, IB, Layer (22): A potsherd of red ware, well-fired, painted with black on red slip, depicting a wavy line in between parallel lines and connected crossed diamond motifs.
3. TLB, IB, Layer (22): A painted potsherd of dull-red ware depicting a triangular motif and obliquely-drawn lines painted with black on red slip.
4. TLB, IB, Layer (22): Fragment of red ware, thin-bodied and stamped with double-bordered squares having a dot in the middle.
5. TLB, IB, Layer (22): A fragment of dull-red ware, fine fabric, stamped with a design made of multiple squares and a dot in the middle.

6. TLB, IB, Layer (22): A painted potsherd of pale-red ware depicting the triangular motif under an arch and a group of oblique lines below. (Compare No. 3 above.)
7. TLB-140, IA, Layer (22): Pl. XII-A, No. 3: A small vase of red ware showing a fluted surface and stamped with a leaf design on the shoulder.
8. TLB, IB, Layer (22): Pl. XV, No. 15: A fragment of red ware depicting a stamped square design consisting of three lines and a dot in the middle.
9. TLB, IB, Layer (22): A Fragment of light-greyish ware depicting an applied wavy motif on the exterior.
10. TLB, IB, Layer (22): A potsherd of red ware showing a wavy line and multiple horizontal lines painted in black on red slip.
11. TLB, IB, Layer (21): A fragment of pale-red ware showing a triple-bordered elliptical motif surrounded by dots.
12. TLB, IB, Layer (22): Pl. XXIII, No. 9: Fragment of a bowl of sgraffiato ware of deep-red colour made of well-levigated clay and well-fired. It shows incised oblique and horizontal lines under the green glaze which is carried over the slip.
13. TLB-144, IA, Layer (21): A vessel of red ware with an out-curved featureless rim painted on the shoulder with black over light-red slip.
14. TLB, IB, Layer (21): Pl. XVI, No. 1: Fragment of light-red ware depicting a circular wheel-shaped design with a dot in the middle. A variant design without rays in between the outer circles was recovered from layer (23) as illustrated on Pl. XV, No. 14.
15. TLB, IB, Layer (21): A vessel of light-red ware with an externally-thickened collared rim showing a square design stamped on the shoulder irregularly.
16. TLB, IB, Layer (21): A fragment of pale-red ware treated on the outer surface with buff wash and stamped with circular designs.
17. TLB, IB, Layer (21): Fragment of pale-red ware showing a double-bordered circular motif with a dot in the middle.
18. TLB, IB, Layer (20): Fragment of dull-red ware showing a four-lined circular design with a dot in the middle, the outer ring decorated with rays.
19. TLB, IB, Layer (20): A carinated neck-fragment with an internally-thickened nail-head rim, painted on the rim with black triangular and loop designs.
20. TLB, IB, Layer (19): A fragment of pale-red ware showing a square design stamped on the shoulder, treated with red slip and bordered by black painted lines. The stamp decoration is dusted over with mica.
21. TLB, IB, Layer (20): Pl. XVI, No. 3: Fragment of light-red ware of fine fabric depicting a crossed square design surrounded by a few dots.

22. TLB, IB, Layer (20): Pl. XVI, No. 5: Fragment of light-red ware showing triple-lined square motif and decorated with rays on one edge. This motif also occurred in layers (25), (20) and (17).
23. TLB, IB, Layer (18): Fragment of red ware depicting a square design and painted over with black.
24. TLB, IA, Layer (18): A potsherd depicting square designs with four dots in the middle of each and rays around. It is of light-red ware.
25. TLB, IB, Layer (18): A thick fragment of red ware depicting a cordon of rope design and painted with black colour over red slip.
26. TLB, IB, Layer (18): Fragment of red ware showing a stamped circular design of thick lines with dots.
27. TLB, IB, Layer (17): Fragment of red ware depicting a circular design with a dot in the middle and rays round it. This type also occurred in layers (18) and (19).
28. TLB, IB, Layer (18): A potsherd of deep-red ware stamped with an elongated design each having a dot in the middle.
29. TLB, IB, Layer (18): Pl. XVI, No. 12: A fragment of light-red ware depicting a stamped diamond motif with sides pressed inside and rays around. Two lines are painted above in black.
30. TLB, IB, Layer (18): A potsherd of red ware showing a square stamped design painted black above.
31. TLB, IB, Layer (18): Fragment of red ware painted with black on the red slip and a cordoned rope design below.
32. TLB, IB, Layer (17B): A potsherd of light-red ware painted with black over red slip.
33. TLB, IB, Layer (17B): Pl. XVI, No. 13: Fragment of a light-red ware showing a diamond motif with a dot in the middle and rays around. The dots were observed in some specimens from layers (22) and (11) having a similar design of three lines.
34. TLB, IB, Layer (17): Fragment of a red ware depicting a diamond motif with dot and painted above and below with black.
35. TLB, IB, Layer (17): An over-fired piece of red ware showing a cordon pressed to form an oblique design.

The other specimens belonging to period IV are described as follows:—

- (i) TLB, IA, Layer (22): Pl. XV, No. 16: A fragment of light-red ware depicting a seven-sided star within a double-lined circle and rays on the outer edge. Parallel horizontal lines, painted in black, are faintly visible.

A similar design having dots within the outer circle, was recorded in layer (21).

- (ii) TLB, IA, Layer (21): Pl. XV, No. 17: A fragment of red ware made of well-leveled clay, well-fired and of fine fabric depicting double-line rectangles and rays on the outer edge. The inner rectangle is divided into two parts.
- (iii) TLB, IA, Layer (21): Pl. XVI, No. 2: A potsherd of dull-red ware depicting a horse-shoe and dotted motif within a double-lined rectangle stamped unevenly on the outer surface.
- (iv) TLB, IA, Layer (20): Pl. XVI, No. 4: A potsherd of light-red ware depicting an elongated design irregularly stamped below a wavy line within two parallel lines in black.
- (v) TLB, IA, Layer (21): Pl. XVI, No. 6: A potsherd of light-red ware, thin-bodied and well-fired showing an oval motif in relief bordered by a double line and dusting of mica on its external surface.
- (vi) TLB, IB, Layer (20): Pl. XVI, No. 7: A potsherd of red ware depicting a diamond motif and four incised dots in the middle.
- (vii) TLB, IA, Layer (18): Pl. XVI, No. 8: A potsherd of light-red ware showing a rosette encircled by three lines, the outer edge of which is rayed.
- (viii) TLB, IA, Layer (18): Pl. XVI, No. 9: A potsherd of red ware depicting a double-lined motif. It was also recorded from layer (19). In layer (11), three lines were depicted, connected like a chain, while in layer (9) the motif consisted of three simple lines.
- (ix) TLB, IA, Layer (19): Pl. XVI, No. 10: A fragment of red ware of fine fabric and stamped with circular designs having six incised dots in the middle of each motif.
- (x) TLB, IA, Layer (19): Pl. XVI, No. 11: A fragment of a splayed-out vessel of fine fabric and well-fired. It shows dots within circles. This motif started in layer (27A). A similar design, without the central dot and three circles around, occurred in layer (29) while in layer (23) a specimen had dots arranged around the outer edge.
- (xi) TLB, IA, Layer (17): Pl. XVI, No. 14: A potsherd of light-red ware, well-fired and showing a rectangular design each having two parallel strokes. The outer surface is dusted with mica.
- (xii) TLB, IA, Layer (17): Pl. XVI, No. 15: A potsherd of pale-red ware depicting square design, the outer edge of which is dented and having four triangular motifs in the middle.
- (xiii) TLB, IA, Layer (21): Pl. XVII, No. 8: A fragment of large globular vessel showing three-lined arch motif with loop on the outer edge. The design is stamped between parallel and oblique lines painted in black. It is of light-red ware and the body shows a mixture of mica.

- (xiv) TLB-354, III, Layer (18); Pl. XVII, No. 16: A potsherd of red ware showing a stamped geometric design. Its inner surface is treated with red slip.
- (xv) TLB, IA, Layer (17); Pl. XVIII, No. 6: A fragment of a large vessel showing a stamped design consisting of a double-lined diamond. Its outer edge is rayed and has an arrow-shaped motif in the middle. It is of red ware, of fine fabric and well-fired. This design was also recorded in layer (9) of the same trench.
- (xvi) TLB, IA, Layer (19); Pl. XXI, No. 9: A fragment of pale-red ware depicting a double-lined diamond motif and square dot in relief in the middle of each design. The outer surface is dusted with mica, and the design is stamped between painted lines, the upper part of which showing multiple zigzag lines painted in black.
- (xvii) TLB, IA, Layer (20); Pl. XXI, No. 13: A potsherd of red ware, of fine fabric and well-fired, depicting squares with a circular dot in the middle surrounded by four small dots in the corners.
- (xviii) TLB, IA, Layer 19; Pl. XXII, No. 7: A fragment of a large vessel of red ware and well-fired, the outer surface of which is stamped with a double-lined circular design and rays around the outer edge. A dot occurs in the middle of each motif. Similar design was also recorded in layers (31), (18), (17) and (9). In layers (27) and (23), the rays were prominently represented.
- (xix) TLB, IA, Layer (19); Pl. XXII, No. 8: A fragment of red ware and well-fired, depicting a four-lined circular design. This motif was very common and was recorded with a light variation in many layers. Exactly similar designs were found in layers (32), (16) and (15). In fact, it starts from layer (36) with three rings instead of four and continues to appear in layers (35), (27A) and (26). In layer (31), a dusting of mica was observed on a similar design while in layer (24), the motif was represented by five circles. In layer (21) only two circles were depicted. In layer (20), there were three crudely-made circles and in layer (19) two circles were shown but the rays around the outer edge were very fine and thin.

POTTERY OF PERIOD V

The pottery of period V again showed a continuation of some types from periods III and IV but the appearance of a few specimens of greyware was new in this horizon. The painted pottery showed a marked decline in frequency and the designs on "Tulamba Stamped Ware" were restricted mostly to diamonds, eyes and elongated circles. Some varied types of plain ware could fairly be compared with the pottery of periods III and IV. Attention may be drawn to the bowls on Fig. 33, No. 2, comparable with period III on Fig. 29, No. 27, and of period IV, Fig. 31, No. 26. The bowls with internal carination illustrated on Fig. 33, Nos. 3 and 14 were comparable with those of period III on Fig. 28, No. 6 and Fig. 29, No. 21, and with period IV as shown on Fig. 31, No. 16. The water pitcher with

an externally-thickened rim of period V on Fig. 33, No. 6, may be compared with that of period IV, Fig. 31, No. 15. The lid with solid knob on Fig. 33, No. 9, is comparable with Fig. 28, No. 2 of period III and Fig. 31, No. 24 of period IV. A globular vase of period V on Fig. 33, No. 19, can well be compared with that of period III on Fig. 28, No. 26.

The following are the selected specimens of period V:—

FIG. 33 (Period V)

1. TLB, I, Layer (16): A fragment of a large vessel of red ware showing cordon below the neck and nail-head rim. It is treated on the inner surface and around the neck with distinctive red slip and painted on the rim and at the neck with black colour.
2. TLB, IA, Layer (16A): A lid of dull-red ware with a flat base and flaring rim.
3. TLB, I, Layer (16): A small lid of red ware, internally-ledged and a flaring featureless rim.
4. TLB, I, Layer (16): Fragment of a vessel of red ware with vertical neck and externally-thickened rim. It is carinated at the neck and the lower part is rough.
5. TLB, I, Layer (16): A bowl of pale-red ware with a disc base, corrugated sides and a featureless rim. This type continues in layers (15A) and (15).
6. TLB, I, Layer (16): A neck of a vessel of red ware with an out-curved externally-cordoned rim. The type also occurred in variant forms in layer (13) and in layer (7) which is the last level of period V.
7. TLB, I, Layer (15): A fragment of pale-red ware with externally-thickened rim.
8. TLB-68, IA, Layer (15): An earthenware oil lamp of pale-red ware with a disc base showing soot marks on the lip.
9. TLB, I, Layer (16): A thick heavy lid, centrally-knobbed, of red ware, well-fired and with an externally-thickened profile near the base. This type occurred in layer (15) also.
10. TLB, IA, Layer (15): Neck-fragment of a vessel of red ware with carinated neck and an out-curved rim. The same type occurred in layer (9) and continued upto the last level of period V in layer (7).
11. TLB, I, Layer (14): A neck of a large vessel with an out-curved nail-head rim which is curved and cordoned. Over the cordon are small incised dots. It is of red ware and well-fired.
12. TLB, IA, Layer (15): Neck of a vessel of red ware, of fine fabric, well-fired with an out-curved, internally-carinated rim and cordoned below the shoulder. Oblique strokes

EXCAVATIONS AT TULAMBA

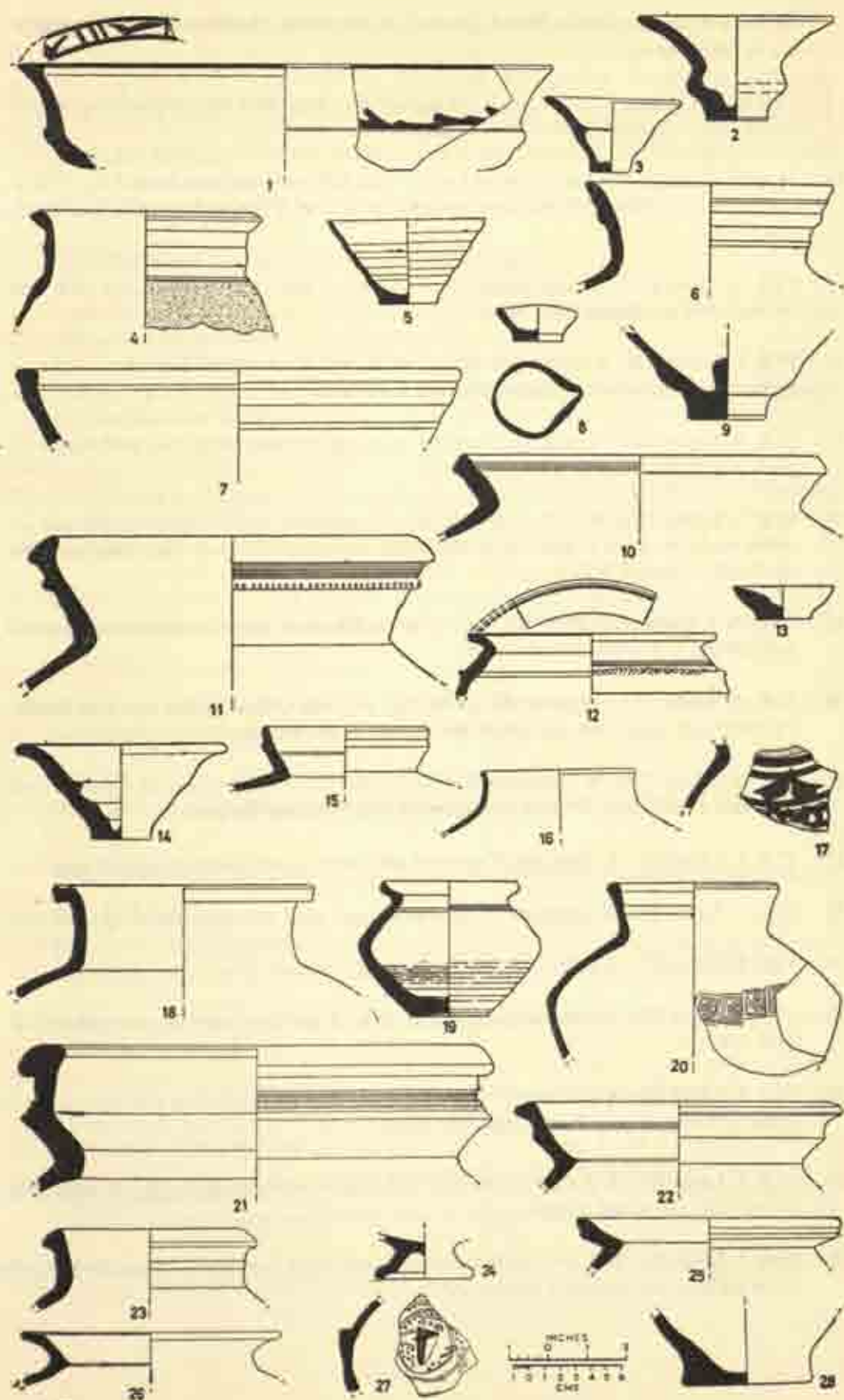


FIG. 33. Pottery of period V from layers (16) to (7).

are incised on the cordon. This type continued upto the mid level (11) of period V but in plain form.

13. TLB-69, IA, Layer (15): A small lid with a disc base and an internally-thickened profile with a featureless rim. It is dull-red ware.
14. TLB-80, I, Layer (14): A lid of red ware, internally-grooved and ledged but with a featureless rim. The type was very common in period V but restricted to mid-level, (16).
15. TLB, I, Layer (13): A neck-fragment of light-grey ware with a carinated neck and an externally-thickened rim.
16. TLB, I, Layer (15): A thick piece of red ware, well-fired and of fine fabric. It has a slightly-thickened rim externally. The type is not common.
17. TLB, I, Layer (18): A painted fragment showing inverted loops and leaf design in black over light-red slip. It is of red ware.
18. TLB, I, Layer (13): A neck of a water-pitcher with an almost straight neck and an out-turned rim which is grooved horizontally on the top. This type continued upto the last levels of period V in layer (7).
19. TLB-75, I, Layer (10); Pl. XII-B, No. 5: A small base of red ware with an out-curved pointed rim and grooved at the neck.
20. TLB, I, Layer (7): Fragment of a vessel of red ware, thin-bodied and fine fabric, stamped with square designs which are crossed in the middle.
21. TLB, I, Layer (10): A fragment of a jar of red ware with an externally-cordoned neck and a nail-head rim and having a carination below the neck.
22. TLB, I, Layer (7): A fragment of pale-red ware with an externally-thickened rim.
23. TLB, I, Layer (9): A fragment of light-grey ware with an externally-thickened rim.
24. TLB, I, Layer (7): A hollow pedestal of light-grey ware.
25. TLB, I, Layer (7): An internally-carinated neck of red ware with an externally-thickened rim.
26. TLB, I, Layer (8): An internally-carinated neck with an out-curved rim having horizontal grooves on top. It is of light-red ware.
27. TLB, I, Layer (8): A decorated piece of light-red ware showing designs in relief and a triangular lug in the middle.
28. TLB, I, Layer (7): Flat-bottomed bowl-fragment of light-red ware. A similar bowl of the same type was recorded in layer (9).

The complete vessels of period V were as below:—

- (i) TLB-80, I, Layer (14); Pl. XI, No. 6: A complete lid of red ware, internally-carinated, with a flat base and flaring rim.
- (ii) TLB-75, I, Layer (10); Pl. XII-B, No. 5: A miniature vase with a carinated shoulder and an out-curved obliquely-cut rim. It is red ware and treated on the outer surface with reddish wash.

The decorated wares include the following:—

1. TLB, I, Layer (16); Pl. XVI, No. 16: A fragment of dull-red ware, well-fired and stamped with a double-lined triangular motif.
2. TLB, I, Layer (16); Pl. XVI, No. 17: A fragment of red ware showing a square design with double-lined circles and dots in the middle, the outer edge of which is rayed. The surface is dusted with mica.
3. TLB, IA, Layer (15); Pl. XVI, No. 18: A small potsherd of dull-red ware depicting an elliptical motif which is crossed in the middle and dotted. The outer edge shows multiple rays.
4. TLB, I, Layer (15); Pl. XVI, No. 19: A potsherd of light-red ware depicting a deeply-stamped diamond motif, the inner part of which contained three lines. The outer edge is rayed.
5. TLB, IA, Layer (15); Pl. XVI, No. 20: A potsherd of red ware depicting an oval motif and stroke-shaped design in the middle.
6. TLB, I, Layer (15); Pl. XVI, No. 21: A potsherd of light-red ware showing a diamond motif with two lines and a small circle in the middle. The outer edge of the diamond is rayed.
7. TLB, I, Layer (16); Pl. XVII, No. 3: A fragment of red ware stamped with a multiple-lined motif.
8. TLB, I, Layer (13); Pl. XVII, No. 9: A fragment of pale-red ware stamped with multiple zigzag lines. A similar design occurred in layers (29), (27A), (27), (25) and (23).
9. TLB, I, Layer (14); Pl. XVII, No. 12: A fragment of red ware of fine fabric depicting a cross square motif.
10. TLB, I, Layer (7); Pl. XVII, No. 13: A potsherd of red ware of fine fabric, thin bodied, stamped with a circular design having rays on the outer edge and a small circle in the middle surrounded by loops.
11. TLB, I, Layer (16); Pl. XVII, No. 17: A fragment of red ware depicting a multiple triangular design consisting of thick lines. A similar motif also comes from layer (15).
12. TLB, I, Layer (16); Pl. XVIII, No. 2: A fragment of deep-red ware of fine fabric and well-fired, stamped with a diamond motif with crossed loops in the middle.

13. TLB, I, Layer (7); Pl. XVIII, No. 3: A fragment of light-red ware showing a diamond motif and the outer edge is decorated with rays.
14. TLB, I, Layer (7); Pl. XVIII, No. 4: A fragment of deep-red ware, of fine fabric, well-fired showing a diamond motif with dots in the middle. The outer edge is decorated with rays.
15. TLB, I, Layer (12); Pl. XVIII, No. 7: A fragment of bright-red ware, well-fired showing a diamond motif and a triangular design with three dots.
16. TLB, I, Layer (16); Pl. XVIII, No. 8: A fragment of red ware, well-fired and showing a triple-lined diamond, the middle of which has three lines flanked by two dots.
17. TLB, I, Layer (8); Pl. XVIII, No. 9: A fragment of deep-red ware, of fine fabric and well-fired. It shows a circle within a double-lined diamond and connected with small crossed lines. A similar design came from layer (26) also.
18. TLB, I, Layer (7); Pl. XVIII, No. 10: A fragment of red ware, of fine fabric, well-fired and showing a double-lined diamond and having a small stroke in the middle instead of circle.
19. TLB, I, Layer (16); Pl. XVIII, No. 11: A fragment of red ware, well-fired and showing a double-lined diamond with a small dot in the middle and rays on the outer edge.
20. TLB, I, Layer (14); Pl. XVIII, No. 12: A fragment of pinkish-red ware showing a diamond of two lines, the central part of which is crossed with lines. The surface is dusted with mica.
21. TLB, I, Layer (10); Pl. XVIII, No. 13: A fragment of red ware showing an elongated eye motif consisting of three lines and a horizontal stroke in the middle. The design is connected and looks like a chain.
22. TLB, I, Layer (7); Pl. XVIII, No. 14: Fragment of red ware, well-fired and depicting a diamond motif and a pair of strokes in the middle. It also occurred in layer (5).
23. TLB, I, Layer (13); Pl. XVIII, No. 15: Fragment of deep-red ware, fine fabric, well-fired showing a connected motif with the outer edge dented.
24. TLB, I, Layer (7); Pl. XIX, No. 1: Fragment of a carinated vessel of red ware, well-fired, depicting a square design with a cross in the middle.
25. TLB, I, Layer (7); Pl. XIX, No. 2: A fragment of deep-red ware depicting an elliptical motif in the middle, divided by lines at a right angle.
26. TLB, I, Layer (14); Pl. XIX, No. 3: A fragment of a vessel showing a square design with crossed corners. The outer edge is rayed.

27. TLB, I, Layer (7); Pl. XIX, No. 4: Fragment of pinkish-red ware showing a rectangular design within a large rectangle. Its one edge is rayed. The design first appeared in layer (34).
28. TLB, I, Layer (14); Pl. XIX, No. 7: Fragment of deep-red ware of fine fabric, well-fired, showing a triple-lined diamond motif with three strokes at two corners. A similar design without the stroke was recorded in layer (23).
29. TLB, I, Layer (16); Pl. XIX, No. 8: Fragment of pinkish-red ware showing an eye motif decorated with dots and lines.
30. TLB, I, Layer (7); Pl. XIX, No. 9: Fragment of dull-red ware, showing an elliptical design. The outer surface is treated with wash.
31. TLB, I, Layer (15); Pl. XIX, No. 10: Fragment of deep-red ware, well-fired and showing an eye motif with a hook-shaped design and the outer edge rayed. The surface is dusted with mica.
32. TLB, I, Layer (13); Pl. XIX, No. 11: Fragment of red ware of fine fabric, well-fired, showing a triple eye motif, the central part of which is crossed with small lines.
33. TLB, I, Layer (7); Pl. XIX, No. 12: An eye motif representing two filled-in corners in the middle which are connected by a line and rays on the outer edge.
34. TLB, I, Layer (9); Pl. XIX, No. 13: Fragment of red ware of fine fabric, well-fired, showing an elongated diamond motif stamped carelessly. Its central part is crossed by two lines and has a small dot in the middle. The outer edge at two sides is rayed. This motif also came from layer (10).
35. TLB, I, Layer (8); Pl. XIX, No. 14: A fragment of light-red ware, well-fired and of fine fabric showing an eye motif with seven small dots in the middle.
36. TLB, I, Layer (15); Pl. XX, No. 1: Fragment of deep-red ware showing an elongated diamond, decorated in the middle with triangular design. It shows faint marks of black paint on the surface.
37. TLB, I, Layer (15); Pl. XX, No. 2: Fragment of light-red ware, depicting a diamond motif and a rectangle in the centre.
38. TLB, I, Layer (15); Pl. XX, No. 3: Fragment of light-red ware showing a three-lined oval design and a cross in the middle. A part of the outer edge is dotted.
39. TLB, I, Layer (15); Pl. XX, No. 4: Fragment of pale-red ware, showing rayed circles, each having eight dots in the middle.
40. TLB, IA, Layer (14); Pl. XX, No. 5: Fragment of a bowl of red ware showing a diamond motif and a triangular design in the middle. The outer edge is rayed.

41. TLB, I, Layer (7); Pl. XX, No. 6: Fragment of dull-red ware depicting a double-lined square and a cross in the middle. This design starts from layer (14).
42. TLB, I, Layer (14); Pl. XX, No. 7: Fragment of a large vessel of red ware showing a three-lined diamond with a cross in the middle. On a similar motif from layer (22) three lines were represented instead of a cross in the middle. The design was also recorded in layer (7).
43. TLB, I, Layer (14); Pl. XX, No. 8: Fragment of red ware showing an elongated diamond enclosing rectangles. The outer edge is rayed.
44. TLB, I, Layer (2); Pl. XX, No. 9: Fragment of red ware showing a diamond motif consisting of multiple lines and small dots along the border. The outer edge is marked by rays. A variant of this motif was recorded in layer (10) which had small dots in the middle.
45. TLB, I, Layer (11); Pl. XX, No. 10: Fragment of red ware showing a circular motif with cross lines in the middle.
46. TLB, I, Layer (10); Pl. XX, No. 11: Fragment of deep-red ware, of fine fabric, depicting a diamond motif and cross lines in the middle.
47. TLB, I, Layer (9); Pl. XX, No. 12: Fragment of dull-red ware showing a double-lined diamond with a rectangle in the middle and dots on the corners.
48. TLB, I, Layer (10); Pl. XX, No. 13: A piece of dull-red ware showing diamonds of three simple lines and a rectangle.
49. TLB, I, Layer (9); Pl. XX, No. 14: Fragment of a light-red ware showing four small diamonds, each enclosing a dot.
50. TLB, I, Layer (7); Pl. XX, No. 15: A potsherd of light-red ware showing rayed and double-lined squares with dots in the middle.
51. TLB, I, Layer (7); Pl. XX, No. 16: A potsherd of pinkish-red ware showing a diamond with cross lines making four squares in each corner.
52. TLB, I, Layer (7); Pl. XX, No. 17: A small potsherd of red ware showing a double-lined diamond with three obliquely-drawn lines in each motif.
53. TLB, I, Layer (7); Pl. XX, No. 18: A fragment of pale-red ware showing a double-lined rayed diamond having crossed lines in the middle.
54. TLB, I, Layer (7); Pl. XXI, No. 4: Fragment of light-red ware showing a triple-lined diamond with the outer edge rayed. A similar design occurred in layer (23) but without oblique strokes in the corners.
55. TLB, I, Layer (7); Pl. XXI, No. 5: Fragment of deep-red ware, of fine fabric, well-fired and treated on the outer surface with red slip. It has a triple-lined diamond motif, one edge of which is dotted and the central part is crossed.

56. TLB, I, Layer (7); Pl. XXI, No. 7: Fragment of red ware of fine fabric and well-fired. It shows a rectangular motif with a diamond in the middle and prominent rays along the outer edge.
57. TLB, I, Layer (7); Pl. XXI, No. 8: Fragment of red ware of fine fabric and well-fired showing a double-lined diamond motif with rays along the outer edges and a cross in the middle. (Compare above Pl. XVI, No. 3; Pl. XX, Nos. 3 and 7.) A similar design was observed in layer (22).
58. TLB, I, Layer (7); Pl. XXI, No. 11: Fragment of bright-red ware, of fine fabric, well-fired and showing rays on both the coins of a diamond motif and a small stroke in the middle. A pit in layer (4) also produced a similar specimen.
59. TLB, I, Layer (12); Pl. XXI, No. 12: A double-lined square design of light-red ware with a pronounced cross in the middle.
60. TLB, I, Layer (7); Pl. XXI, No. 15: A raised cross in the middle of a double-lined square motif on a red ware sherd of fine fabric.
61. TLB, I, Layer (7); Pl. XXII, No. 3: A potsherd of deep-red ware stamped with a volute design and having rays along the outer edge. A similar design with mica dusted over the external surface, and having oblique lines, first appeared in layer (52) and was found to be continuing with slight variations in layers (21), (19), (16), (14), (10) and (9).
62. TLB, I, Layer (14); Pl. XXII, No. 4: A regular motif with a cross and four dots in the middle stamped on red ware piece, of fine fabric and well-fired.
63. TLB, I, Layer (16); Pl. XXII, No. 5: Three circles enclosing a dot having rays along the outer edge and a dusting of mica, stamped on well-fired piece of red ware. The motif starts in layer (38). In layer (28A) mica dusting over the surface and a sharp rim were recorded. In layer (21) no mica was seen but a similar design, as on the specimen now described, was recovered from layers (10) and (1).
64. TLB, I, Layer (7); Pl. XXII, No. 10: Fragment of light-red ware showing three cross lines filled in by a semi-circle. It has rays around the outer edge.
65. TLB, I, Layer (9); Pl. XXII, No. 11: Two rayed circles, enclosing a small one having a dot, impressed on a sherd of deep-red ware, well-fired and of fine fabric.
66. TLB, I, Layer (7); Pl. XXII, No. 12: A knobbed-circle enclosing a smaller one with a dot, and the hole enclosed by a simple ring, on a well-fired piece of red ware.
67. TLB, IA, Layer (15); Pl. XXIII, No. 7: A grey ware piece with decoration in relief. It is a rare specimen.

POTTERY OF PERIOD VA

Period VA is distinguished by the appearance of glazed ware consisting of bowls of light-red or red colour, well-fired with inner surfaces glazed

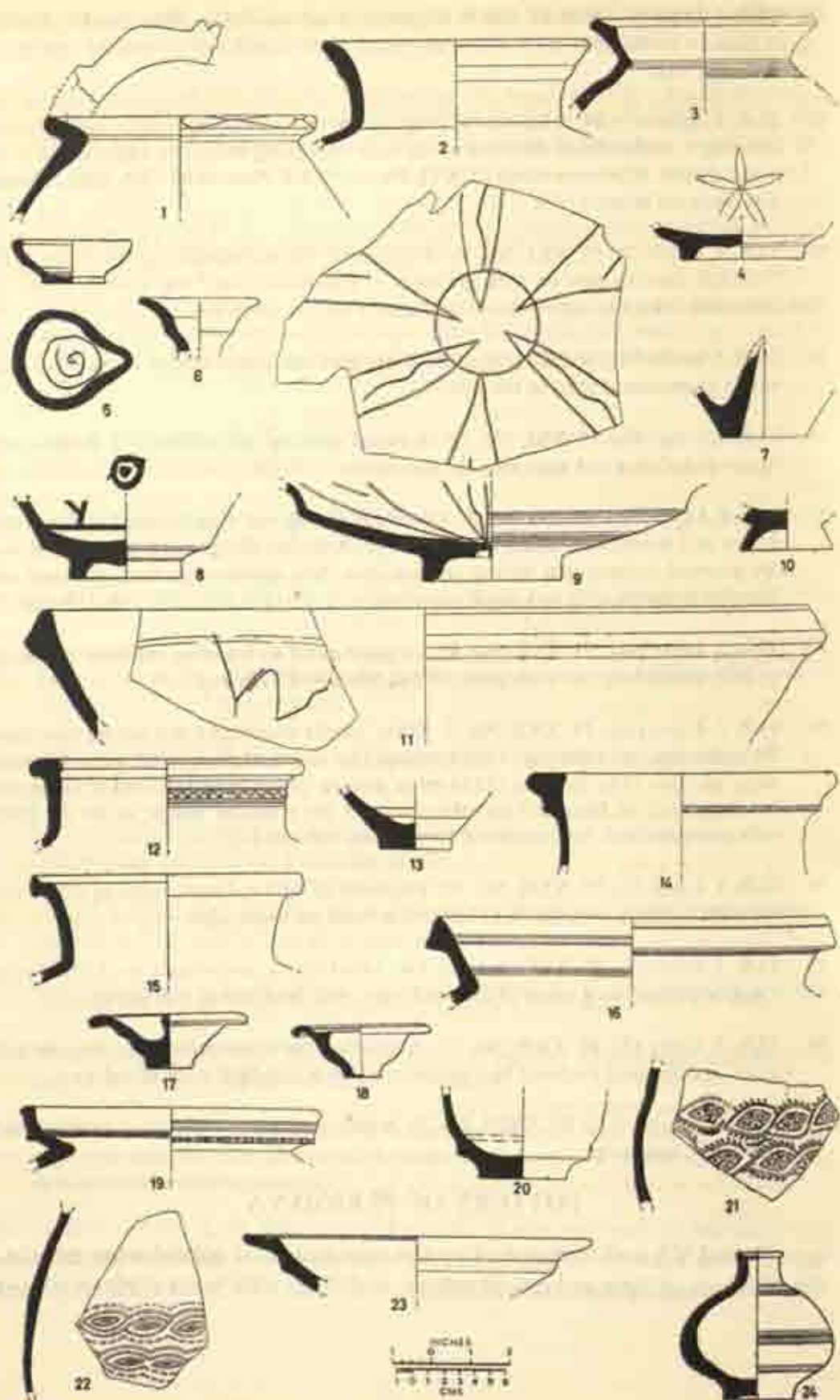


FIG. 34. Pottery of period V from layers (6) to (1).

in white, orange, blue or green colours. Incised lines, too, occur under the glaze.

"Tulamba Stamped Ware" depicts more elaborate designs than those of period V but the frequency of its occurrence considerably decreases. The recurrent types include earthenware oil lamps, Fig. 34, No. 5; lids with hollow conical knobs, Fig. 34, No. 7; lids with solid knobs, Fig. 34, No. 17 and lids with internal carination, Fig. 34, No. 18. Some plain vases continue in period VA also, but new forms were also present, as on Fig. 34, No. 11.

The selected specimens are described as follows:—

FIG. 34 (Period VA)

1. TLB, I, Layer (6): A fragment of red ware, of fine fabric with out-curved rim, the edge of which is cut by a sharp instrument. It is treated on the exterior surface with light-red slip.
2. TLB, I, Layer (6): Neck of a water pitcher with a slightly out-curved and externally thickened rim. It is of bright-red ware.
3. TLB, I, Layer (6): A fragment of red ware of fine fabric well-fired with internal carination at the neck and an internally-thickened rim. It has a groove around the neck. This type continued upto layer (1).
4. TLB, I, Layer (4); Pl. XXIII, No. 10: Fragment of a bowl of dull-red ware with ringed base and treated on the inner side with light-blue glaze. The bottom on the inner side shows a floral motif made of incised lines.
5. TLB-26, I, Layer (6): An earthenware oil lamp with incurved rim and a disc base.
6. TLB, I, Layer (6): A fragment of a lid of red ware internally-ledged and a flaring featureless rim.
7. TLB, I, Layer (2): A lid of red ware with a hollow conical knob in the middle.
8. TLB, I, Layer (4); Pl. XXIII, No. 11: Fragment of a bowl of red ware carinated near the ringed base and treated on the interior with brown glaze which shows a painted design at the bottom and at the rim.
9. TLB, I, Layer (6): A fragment of a large open-mouthed dish of red ware and ringed base. It shows incised lines on the inner side over which opaque and light-greyish glaze is coated.
10. TLB, IB, Layer (1): A ringed-base of a bowl, glazed internally with light-blue colour and a circular incised ring at the bottom.

11. TLB, I, Layer (4): A piece of a large vessel of red ware with an externally-thickened triangular rim. Incised lines are drawn on the interior.
12. TLB, I, Layer (3): Fragment of red ware, well-fired with an externally-thickened rim and a straight neck showing an incised wavy design.
13. TLB, I, Layer (4): A bowl-fragment of light-grey ware with flaring sides.
14. TLB, IB, Layer (10) Pit: A fragment of dull-red ware, externally-cordoned and with a nail-head rim.
15. TLB, IB, Layer (1) Pit: A fragment of red ware with a slightly out-curved neck and externally-thickened, having horizontal grooves on top.
16. TLB, IB, Layer (1) Pit: A carinated-neck of red ware with an externally-thickened triangular rim.
17. TLB, I, Layer (1): A knobbed-lid of red ware with flaring but under-cut rim.
18. TLB, I, Layer (1): A lid of red ware internally-ledged.
19. TLB, IB, Layer (1) Pit: A carinated-neck of pale-red ware with an externally-cordoned rim.
20. TLB, IB, Layer (1): Pit: Fragment of a bowl of red ware with prominent carination near the bottom.
21. TLB, IB, Layer (1) Pit: A potsherd of light-red ware impressed with a filled-in eye motif.
22. TLB, IB, Layer (1) Pit: A potsherd of red ware impressed with an eye motif.
23. TLB, IB, Layer (1) Pit: A fragment of red ware with a splayed-out rim.
24. TLB-97, Surface; Pl. XXI-B No. 3: A complete globular vase of red ware, small-mouthed and externally-grooved. It has a perforated bottom.

The following specimens are also included with illustrations.

- (i) TLB-26, I, Layer (6); Pl. XI, No. 5: An earthenware oil lamp of red ware with incurved sides and marks of soot on the lip.
- (ii) TLB, IA, Layer (1) Pit; Pl. XVII, No. 7: A potsherd of red ware of fine fabric, well-fired showing a roughly-stamped leaf design.
- (iii) TLB, I, Layer (1); Pl. XVII, No. 10: Fragment of a light-red ware, well-fired and showing stylized leaf designs.
- (iv) TLB, IA, Layer (1) Pit; Pl. XVII, No. 15: An over-fired piece of red ware having spoked-wheel design and dots surrounded by rays around the outer edge.

- (v) TLB, IB, Layer (1) Pit; Pl. XVII, No. 18: A fragment of deep red ware, well-fired and showing a stamped square design made by means of crossed lines. A variant of the same design with a dot in each pattern was recorded in layer (22) while the rays around the design occurred in layer (7) of the same trench. This specimen recalls a parallel with those found at Ahichchhatra⁴⁰ stratum I dated between A.D. 850 to 1100.
- (vi) TLB, I, Layer (6); Pl. XVIII, No. 1: A fragment of a large vessel showing a diamond motif with horizontally-drawn lines in the middle and flanked by two dots and a vertical line. It is of red ware of fine fabric and well-fired.
- (vii) TLB, IA, Layer (1); Pl. XVIII, No. 5: A potsherd of red ware, well-fired, depicting a rayed diamond and oval design with a dot in the middle of each.
- (viii) TLB, IA, Layer (1) Pit; Pl. XIX, No. 5: Triple-lined eye motif stamped on a piece of red ware.
- (ix) TLB, I, Layer (5); Pl. XX, No. 19: A fragment of pale-red ware stamped with a geometric design with dots and rays around the outer edge.
- (x) TLB, I, Layer (7); Pl. XX, No. 20: A circular design with a cross in the middle and rays on the outer edge. Stamped on a piece of light-red ware which is well-fired.
- (xi) TLB, I, Layer (4); Pl. XXI, No. 1: Diamond motif and two dots and a leaf or plant motif in the middle.
- (xii) TLB, I, Layer (4); Pl. XXI, No. 2: A potsherd of red ware, of fine fabric showing dented design and dots within connected diamonds. A similar design occurred in layer (6) of the same trench.
- (xiii) TLB, IA, Layer (1); Pl. XXI, No. 3: A deep-red ware potsherd of fine fabric and well-fired, showing a diamond motif enclosing a many-legged animal (?).
- (xiv) TLB, IA, Layer (1) Pit; Pl. XXI, No. 6: An evenly-fired piece of red ware of fine fabric depicting a double-lined diamond with a cross. A similar design occurred in layer (8).
- (xv) TLB, I, Layer (4); Pl. XXI, No. 10: Fragment of light-red ware, well-fired and showing square design.
- (xvi) TLB, IA, Layer (1) Pit; Pl. XXI, No. 14: Cross-motif stamped on a connected diamond design on a piece of red ware of fine fabric.
- (xvii) TLB, I, Layer (1); Pl. XXI, No. 16: Fragment of a large vessel of red ware showing a double-lined diamond motif with vertical lines in the middle, flanked by triangular motif in relief.

⁴⁰ *Ancient India*, No. 1, Fig. IX, No. 23.

- (xviii) TLB, I, Layer (1); Pl. XXII, No. 1: A potsherd of deep-red ware having fine fabric, made of well-levigated clay and well-fired. It is stamped with a volute design on the external surface. This design was very common in almost all the levels of Trench I from layer (38) onwards. Exactly similar specimens were recorded in layers (30), (26), (25) and (9). In layers (35) and (32) some volutes were represented while in layer (32) mica was dusted on the surface. In layer (31) connected volutes; in layers (24) and (23) excessive application of mica on the external surface; in layer (21) many volutes; in layer (16) thin and sharp volutes; in layer (11) volutes on a spouted vessel and in layer (10) a design crudely-stamped were recovered. It may be pointed out that the specimen as illustrated has precise parallels with one found at Ahicchechatra⁴¹ in stratum I A.D. 850 to 1100.
- (xix) TLB, I, Layer (5); Pl. XXII, No. 2: A group of four hooks arranged in opposite directions within a circular design stamped on a piece of red ware.
- (xx) TLB, I, Layer (5); Pl. XXIII, No. 1: Elongated diamond with a ladder motif in the middle. Such designs were seen in layers (10) and (4).
- (xxi) TLB, I, Layer (3); Pl. XXIII, No. 2: An unidentified motif in relief, enclosed by a simple line forming a leaf, is stamped on a piece of light-red ware.
- (xxii) TLB, I, Layer (2); Pl. XXIII, No. 3: A fragment of dull-red ware showing a crossed diamond with rays around the outer edge.
- (xxiii) TLB, I, Layer (1); Pl. XXIII, No. 4: A dull-red potsherd with a crudely-stamped eye motif.

In this description, the following specimens are included because of different motifs stamped on them. All came from the top soil of various trenches.

- (i) Pl. XXIII, No. 5: A fragment of light-red ware showing a double-lined diamond with double-crossed lines and a small dot in the middle.
- (ii) Pl. XXII, No. 6: A fragment of red ware showing a double-ringed circular design each having nine dots and small rays around the outer edge. It may be pointed out that a similar design was found in layer (27A) and the same with four dots within a single circle, were observed from layer (17).
- (iii) Pl. XXII, No. 13: A double-ringed and rayed motif having a dot in the middle stamped on a piece of well-fired red ware. A variant of this was recorded in layer (16).
- (iv) Pl. XIX, No. 15: A cross of thick lines with a dot in each corner.
- (v) Pl. XIX, No. 15: An eye motif stamped on a piece of red ware.

⁴¹ Ibid.

- (vi) Pl. XVII, No. 6: A fragment of a cup made of light-red ware, the outer surface of which is fluted.
- (vii) Pl. XVII, No. 11: A piece of red ware showing leaf (?) design.
- (viii) Pl. XVII, No. 14: A piece of well-fired red ware showing design made of multiple lines and dots suggesting a leaf motif.
- (ix) Pl. XIII, No. 12: A piece of red ware painted with black parallel and wavy lines on reddish slip. The pottery with such painting is not common in period VA. It must be from an earlier level.

POTTERY OF TRENCH TLB-III

The pottery from the stratified layers of TLB-III provided parallels with those of main Trench TLB-I on the basis of which the whole assemblage was divided into various periods. It was only the evidence of pottery which helped us to understand the story of the moat in the wide depression around the citadel mound.

The pottery with impressed designs from layers (27) to (24) which was comparable with that of the last levels of period II and particularly with period IIA is illustrated on Pl. XXIV. Here, more parallels are given.

The layers which have been cut for making a V-shaped ditch or moat revealed pottery largely comparable with the last level of periods II, IIA and early levels of IIB. The beaked-rim illustrated on Fig. 35, No. 11, may be compared with that of period II on Fig. 21, No. 3. The bowl with a curved profile on Fig. 35, No. 8, is comparable with Fig. 21, No. 14 of period II. The externally-thickened rim with grooved neck on Fig. 36, No. 7, is paralleled by that of period IIB, Fig. 26, No. 7. The pan with a nail-head rim on Fig. 36, No. 16, may be equated with that of period IIA, Fig. 25, No. 4.

The illustration of Figs. 35 and 20 belong to periods I to IIB because these layers provided us with the early history and character of deposits in the depression around the high mound. The pottery from the upper layers is not illustrated but it was observed that "Tulamba Stamped Ware" in TLB-III started from layer (16) and the designs on it were comparable with those of period III in the main trench. The pottery types recovered from layers (10) to (5) belonged to period IV, and those from the debris layers (4) to (1) were mixed up but were easily assignable to periods V and VA.

The following are the selected types:

FIG. 35 (Pottery from TLB-III)

1. TLB, III, Layer (27): A fragment of a large bowl of red ware with an incurved externally-thickened and grooved rim.
2. TLB, III, Layer (27): A complete bowl of red ware with a disc base and flaring sides. It has an incurved featureless rim and shows an uneven inner surface.
3. TLB, III, Layer (27): A fragment of a dish of red ware with incurved side and a nail-head rim.
4. TLB, III, Layer (27): A fragment of a large bowl with a flat thick base and flaring sides. It is of pale-red ware and is unevenly fired.
5. TLB, III, Layer (27): A fragment of a large bowl of red ware with an incurved and externally-grooved rim.
6. TLB-370, III, Layer (27): A lid of red ware with splayed-out rim and a cup-like knob in the middle.
7. TLB, III, Layer (27): A fragment of a vessel of pale-red ware with an externally-thickened and grooved rim.
8. TLB, III, Layer (27): A fragment of a bowl with a ledged profile and flat base. It is of deep-red ware.
9. TLB, III, Layer (27): Fragment of a vase with ledged sides and a flat, thick base.
10. TLB, III, Layer (27): A bowl with convex sides and flat base of red ware.
11. TLB, III, Layer (27): Fragment of a vessel of red ware with a nail-head rim.
12. TLB, III, Layer (27): High-ledged neck with an externally-thickened rim, of red ware and a line of rosettes impressed on the shoulder.
13. TLB, III, Layer (27): A fragment of a high neck of red ware with an externally-thickened incurved rim and grooved outer surface.
14. TLB, III, Layer (27): A fragment of a bowl with a grooved outer surface and externally-thickened rim. It is of pale-red ware.
15. TLB, III, Layer (27): A thick fragment of red ware with straight neck.
16. TLB, III, Layer (27): A cordoned piece of red ware showing impressed strokes on the cordon. The outer surface below the cordon of this vessel is rough.

EXCAVATIONS AT TULAMBA

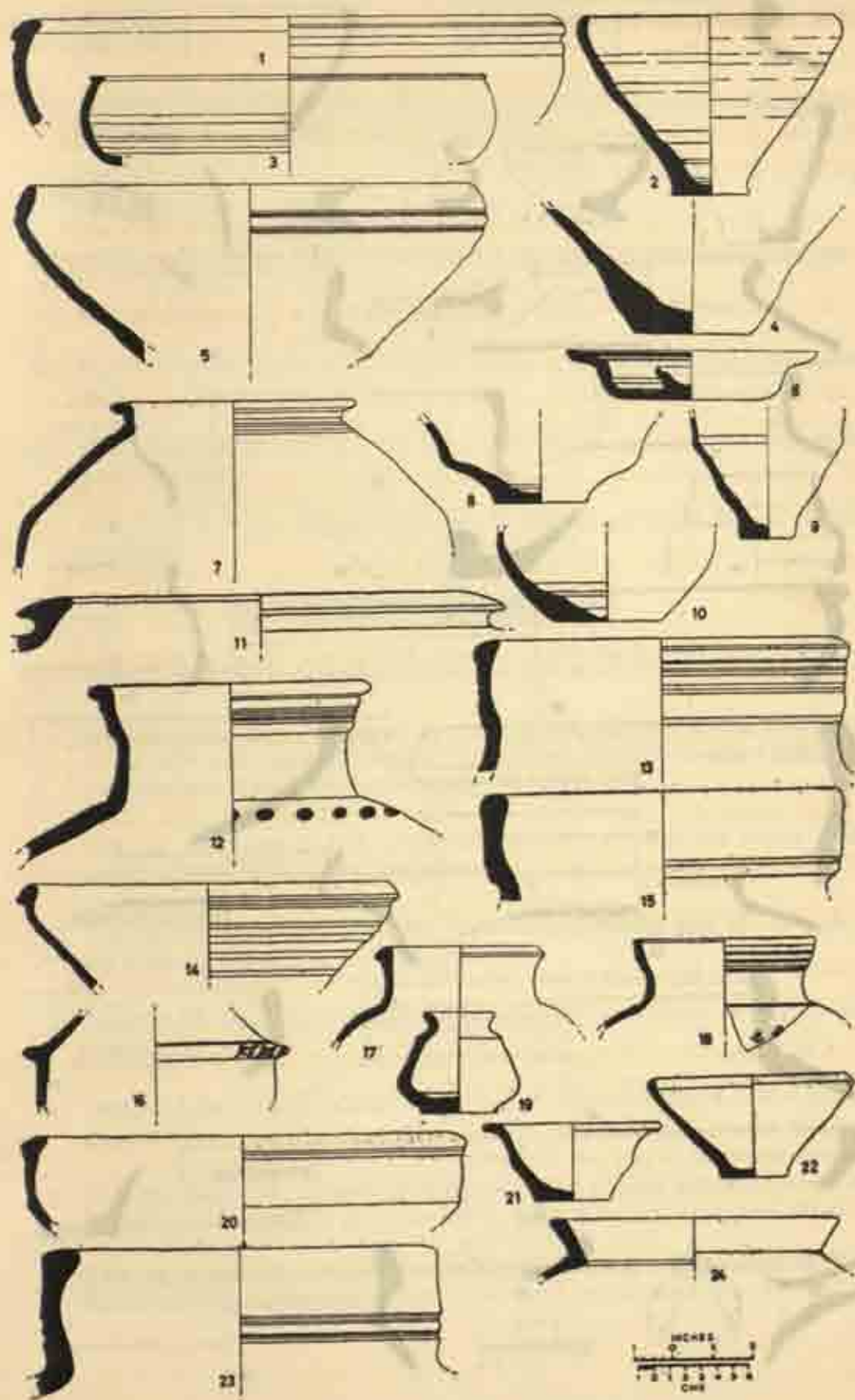


FIG. 35. Pottery from TLB-III, from layers (27), (26) & (25).

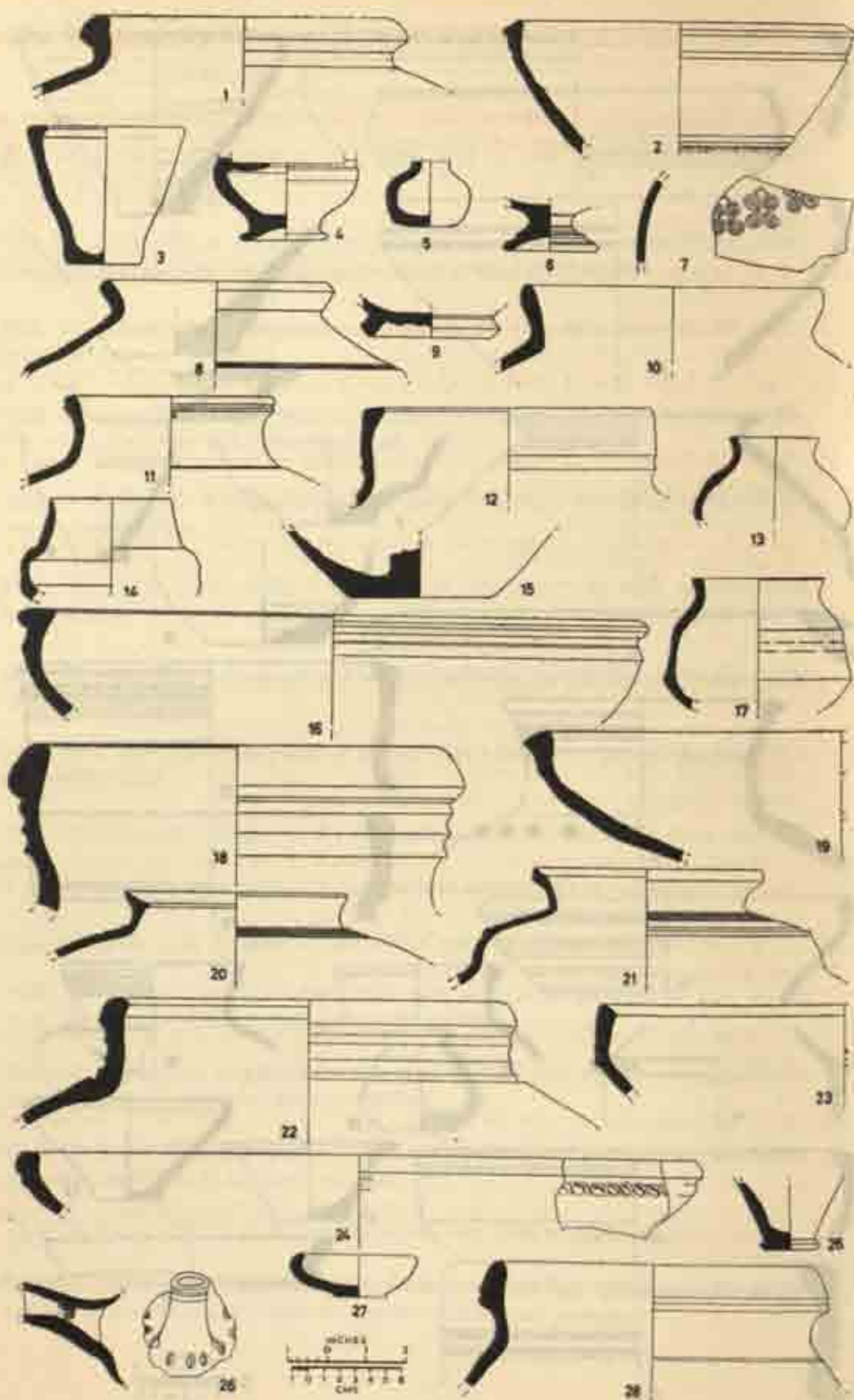


FIG. 36. Pottery from TLB-III, from layers (24) to (18).

17. TLB, III, Layer (27): A straight neck of a vessel with an externally-thickened beaked rim.
18. TLB, III, Layer (27): A fragment of red ware, of fine fabric with externally-thickened, grooved rim and an incised-design on the shoulder.
19. TLB-379, III, Layer (27): A small vase of red ware with a flat base and an out-curved featureless rim.
20. TLB, III, Layer (26): A fragment of a vessel with internally-thickened beaked rim.
21. TLB, III, Layer (26): A bowl of red ware with a flaring rim and a flat base.
22. TLB, III, Layer (26): A bowl of red ware with an incurved featureless rim and flat base.
23. TLB, III, Layer (25): A thick base of a vessel with an internally-thickened rim and grooved externally.
24. TLB, III, Layer (25): A fragment of red ware with an out-curved rim and carinated at the neck.

FIG. 36 (Pottery from TLB-III)

1. TLB, III, Layer (24): A fragment of red ware with an out-curved nail-head rim.
2. TLB, III, Layer (24): A fragment of a bowl of deep-red ware treated on the inner surface with wash, having corrugated sides and an externally-thickened beaked rim. The lower part of the bowl is made rough.
3. TLB, III, Layer (24): A bowl of pale-red ware with flat base and uneven profile, having an internally-thickened beaked rim.
4. TLB-364, III, Layer (24): A handled ink-pot with a pedestal base of red ware. It has a circular perforation on the flat top.
5. TLB-360, III, Layer (24): A small vase of dull-red ware, globular in shape with a slightly concave base.
6. TLB, III, Layer (24): A pedestal base of a vase, externally-grooved. It is of light-red ware.
7. TLB, III, Layer (24): A potsherd of pale-red ware, stamped externally with a connected S-shaped design.
8. TLB, III, Layer (23): A fragment of pale-red ware having a rough surface and with an out-curved featureless rim.

9. TLB, III, Layer (23): A ringed-base of pale-red ware showing a number of subsidiary rings at the bottom.
10. TLB, III, Layer (23): A fragment of dull-red ware having a rough exterior surface and with an externally-thickened featureless rim.
11. TLB, III, Layer (23): A neck fragment with an externally-thickened grooved rim. It is of pale-red ware.
12. TLB, III, Layer (23): A neck fragment of red ware with a slightly inturned rim and grooved at the neck.
13. TLB, III, Layer (23): A fragment of a small vase of red ware with an out-curved featureless rim.
14. TLB, III, Layer (23): A fragment of a vase of red ware, well-fired and having a rough outer surface. It has carination at the neck and a sharp featureless rim.
15. TLB, III, Layer (22): A fragment of a large cover with flat base and knob in the middle. It has flaring sides.
16. TLB, III, Layer (22): A fragment of a large vessel of red ware with an externally-thickened nail-head rim and cordoned at the neck.
17. TLB, III, Layer (22): A fragment of a small vase of pale-red ware, carinated at the base and having a featureless rim. It is treated on the exterior with wash. A similar fragment was recorded in layer (20).
18. TLB, III, Layer (22): A fragment of a large vessel with an externally-thickened rim and grooved at the neck.
19. TLB, III, Layer (22): A fragment of red ware, of fine fabric and treated on the outer surface with wash. It has an externally-thickened nail-head rim.
20. TLB, III, Layer (22): A fragment of a red ware with an obliquely-cut rim and a series of grooves on the shoulder.
21. TLB, III, Layer (22): A fragment of a vessel of red ware with an externally-thickened sharp rim and a series of grooves on the shoulder. It is of fine fabric and shows a thick profile in the lower part. A cordon runs below the shoulder.
22. TLB, III, Layer (21): A fragment of a large vessel of red ware showing multiple grooves at the neck.
23. TLB, III, Layer (19): A fragment of dish or pan with an inturned obliquely-cut rim.
24. TLB, III, Layer (21): A fragment of a large pan with a slightly inturned and externally-grooved rim. The external surface is made rough.

25. TLB, III, Layer (21): A fragment of red ware with a disc base and flaring sides. It is treated on both sides with deep-red slip.
26. TLB, III, Layer (20): A splayed-out rim of red ware showing notches at the base and grooves near the edge.
27. TLB-284, III, Layer (7): An earthenware oil lamp of red ware with a disc base and an incurved rim.
28. TLB, III, Layer (18): A fragment of deep-red ware with an externally-thickened and collared rim.

DECORATED POTTERY FROM TRENCH III

The decorated pottery recovered from layers (27) to (24) is comparable with that of periods IIA and IIB of the main Trench TLB-I on the high mound. The following specimens from the lower levels are selected for illustration:

PLATE XXIV

1. TLB, Layer (27): A thick piece of red ware decorated with an incised triangular motif. Similar specimens come from first to second century A.D. Level Charsada.⁴²
2. TLB, III, Layer (27): A fragment of a vessel, thick-bodied, impressed with a grooved design on the shoulder.
3. TLB, III, Layer (27): Fragment of light-red ware impressed with a circular design.
4. TLB, III, Layer (26): A fragment of a vessel of light-red ware impressed on the shoulder with oblique designs crossed vertically.
5. TLB, III, Layer (26): Fragment of dull-red ware incised on the shoulder with a group of oblique lines.
6. TLB, III, Layer (25): Fragment of dull-red ware impressed on the shoulder with a loop design.
7. TLB, III, Layer (26): A piece of light-red ware showing a group of incisions on the shoulder.
8. TLB, III, Layer (25): A piece of light-grey ware impressed on the shoulder with a circular floral motif, comparable with that from period IV of Hastinapura,⁴³ belonging to the early second century B.C., to the end of third century A.D.

⁴² Sir Mortimer Wheeler, *Charsadda*, 1962, No. 296

⁴³ B.B. Lal, *Excavation at Hastinapura*, in *Ancient India*, No. 10 and 11, Pl. XXXII, No. 14.

POTTERY OF PERIOD IIB FROM TLB-III

PLATE XXIV

9. TLB, Layer (22): Fragment of red ware showing a semi-circular motif consisting of multiple loops.
10. TLB, Layer (24): A piece of dull-red ware showing a dagger motif pointing downward comparable to that found from period IV of Hastinapura⁴⁴ and from stratum IV of Sirkap⁴⁵ assigned to early Circa 90 B.C.
11. TLB, Layer (23): A piece of dull-red ware showing a diamond and triangles incised on the surface.
12. TLB, Layer (22): Fragment of a vase of dull-red ware showing zigzag and parallel lines above a line of notches.
13. TLB, Layer (24): A potsherd depicting a circular motif connected with a zigzag line impressed on the exterior surface.

All the specimens illustrated on Pl. XXIV are of coarse fabric.

MINOR ANTIQUITIES

From TLB-I, II and III, quite a number of antiquities consisting of terracotta objects such as dabbers, toy cart wheels, human and animal figurines, pieces of plaque; copper and iron objects of household use; beads of clay and semi-precious stone, bangles of shell, glass and copper; stone objects consisting of pestles and whetstones, as well as coins of silver and copper, were recovered. Of much interest, was a necklace of 32 beads with a silver pendant depicting the three-faced Shiva which was found in the small Trench TLB-II. The antiquities belonged to all periods of occupation, *viz.*, from I to VA and are classified as under:—

TERRACOTTA OBJECTS

By far the largest number of antiquities consisted of burnt-clay which presented a wide variety. Most of the antiquities were recorded from TLB-I and III. The selected specimens are described according to the following classification:—

DABBERS

Pl. XXV, No. 2 A complete dabber with convex base and a line of

⁴⁴ Ibid, Pl. XXXII, No. 18.

⁴⁵ Sir John Marshall, *Taxila*, Vol. III, Pl. 128, No. 248.

notches around the neck. The top shows a circular hole for handle.

TLB-120, IA, Layer (18), Period IV.

- Pl. XXV, No. 5: A complete dabber of terracotta with smooth convex base, cordoned around the neck and without hold. It has a *Swastika* mark on the body.

TLB-363, IB, Layer (51), Period I.

TOY CART WHEELS

Among the numerous wheels of various sizes, three specimens from different levels are illustrated:—

- Pl. XXV, No. 6: A small hand-made circular wheel with projected ends with perforation.

TLB-365, III, Layer (24), Period IIB.

- Pl. XXV, No. 9: A hand-made wheel of fine clay with one side decorated by incised lines and a petal motif around the projected end of the perforation.

TLB IB, Layer (51), Period I.

- Pl. XXV, No. 10: A terracotta wheel with knobbed ends and showing an uneven surface.

TLB-303, IB, Layer (39), Period IIA.

TOY GRINDING MILL

- Pl. XXV, No. 8: A fragment of the upper part of a terracotta grinding mill, decorated on the top with incised notches and triangular designs. It was the only specimen found at Tulamba.

TLB-40, Top Soil.

DECORATED LIDS

- Pl. XXV, No. 7: A hand-made terracotta lid with an even bottom and a loop handle on top. It is excessively-decorated with applied *Swastika* design on the handle and upper surface. The upper surface is further decorated

by deeply incised dots which run along the edge and also on the handle.

TLB-349, IB, Layer (48), Period II.

PLAYING DISCS

The playing discs made of pottery were many in number and were recorded at various levels of the site. Some specimens were plain while quite a few were made of painted and stamped pottery.

Pl. XIII, No. 16: An under-fired circular playing disc, thick-bodied and having incised marks on both sides.

TLB-300, IA, Layer (39), Period IIA.

Pl. XIII, No. 17: A thick-bodied playing disc of pottery with rubbed edges.

TLB-338, IB, Layer (44), Period II.

Pl. XIII, No. 18: A playing-disc of "Tulamba Stamped Ware" with a red band painted on one edge.

TLB-274, IB, Layer (35), Period III.

Pl. XIII, No. 19: A playing disc of pottery of light-red ware, painted on one side with black colour over light-reddish slip. It shows uneven edges.

TLB-89, I, Layer (14), Period V.

Pl. XIII, No. 20: A moulded disc of pottery, of fine clay with a double perforation in the middle intended to be threaded for spinning.

TLB-81, IA, Layer (17), Period IV.

MISCELLANEOUS OBJECTS

FIG. 38, No. 2:

A compartmented square or rectangular vase of light-red colour of fine fabric, well-fired and with a polished exterior surface over which

human figurines were incised. It may represent a casket for ceremonial or religious purposes. On one side, two crudely-incised male standing figures are depicted with their right hands raised and left hands placed on the waist in an akimbo pose. They have big eyes, deep navels and pot-bellies. From their representation, they seem to be companion titular deities which possibly are represented on the other side in similar manner. On two sides which are badly broken, there are some incised marks which resemble something in Brahmi script.

TLB-338, IB, Layer (44), Period II.

Pl. XXV, No. 4: A terracotta object with concave sides and flat ends.

TLB, IB, Layer (50), Period I.

Pl. XXV, No. 11: A rectangular hand-made object, probably the frame of a toy cart. It has four perforations across the width of the body and one at the lower end through two projecting edges. The top is partly damaged.

TLB-331, IA, Layer (41), Period IIA.

Another similar specimen, broken in two pieces, was found from Trench III, Layer (27) belonging to period II which had incised lines on top.

Pl. XXV, No. 12: A crescent-shaped terracotta object with flat bottom and having perforated ends.

TLB-334, IA, Layer (43A), Period II.

Pl. XXV, No. 13: A fragment of a terracotta object with one edge decorated in relief and having a projecting end which is perforated.

TLB-259, IB, Layer (35), Period III.

HUMAN FIGURES*

No complete human figurine was found but crudely-made fragments, pieces of plaque and moulds of figurines were many from various levels and also from the surface of the mound.

*The writer is thankful to Mr. R.K. Sarma, Custodian, for his comments on some human figurines.

- Pl. XXVI-A, No. 1: A terracotta mould of a male head, having a necklace with pendant. It shows beautiful long and wide eyes and fleshy cheeks. The execution of this piece reflects serene divinity. The crescent on its forehead is usually found on the head of Shiva. The back of the piece is hollow.

TLB-283, 1C, Layer (36), Period IIB.

- Pl. XXVI-A, No. 2: A bejewelled female moulded head with wide and long eyes, thick lips and an elongated nose. The ear lobes are marked by circular pendants and the necklace is indicated by notched incised dots with a leaf-shaped pendant. On the pendant a triangular design is represented.

TLB-353, III, Layer (18), Period IIB.

- Pl. XXVI-A, No. 3: A fragment of terracotta plaque representing a standing male figure with four hands. The head and the legs are damaged. In one of the right hands he is holding some weapon and the other right hand is raised in some *Mudra* or pose. In his left hand there is a garland near the elbow while the other hand is missing. A necklace and girdle are also visible. The execution of human body is very rigid.

TLB-9, Surface.

- Pl. XXVI-A, No. 9: A moulded standing figure of female in terracotta. She is profusely bedecked with jewellery and holds some branch of a tree or a tuft of rice suggesting that she is the goddess of fertility.

TLB-96, Surface.

- Pl. XXVI-A, No. 5: A crudely-modelled hand-made human figurine of terracotta with hunched-back, pointed face. The arms are broken.

TLB-265, 1A, Layer (34), Period III.

- Pl. XXVI-A, No. 6: Lower part of a human figurine with arms folded in front of legs. It is of pale-red terracotta colour.

TLB-366, III, Layer (27), Period IIA.

- Pl. XXVI-A, No. 7: A crudely-modelled human figurine of terracotta with wide legs and arms. It was probably meant to be placed on an animal figurine and thus may represent a rider.

TLB-314, Surface.

- Pl. XXVI-B, No. 1: Fragment of terracotta plaque depicting folded human legs and a right hand placed on the left knee. It was probably a part of a bent human figure.

TLB-257, IB, Layer (35), Period III.

- Pl. XXVI-B, No. 2: A fragment of a plaque showing a bejewelled human body.

TLB-316, Surface.

- Pl. XXVI-B, No. 7: A crudely-modelled human figurine probably female, with a conical head-dress.

TLB-319, Surface.

ANIMAL FIGURINES

Numerous animal figurines, mostly of the bull, horse and elephant were recovered from the excavated trenches. Most of the specimens were crudely-modelled but quite a number of them were marked by their naturalistic representation.

- Pl. XXVI-B, No. 6: A fragment of plaque depicting a running horse.

TLB-315, Surface.

Pl. XXVI-B, No. 8: A head of a ram (?) fixed on the neck of a vessel made of red ware. It has pronounced eyes and horns decorated with incised lines.

TLB-292, IB, Layer (38), Period II-B.

Pl. XXVII-A, No. 1: Saddled horse figurine, head broken.

TLB-146, IA, Layer (23), Period III.

Pl. XXVII-A, No. 2: Front part of a bull figurine with pronounced hump, head partly damaged.

TLB-22, IA, Layer (15), Period V.

Pl. XXVII-A, No. 3: Body of a saddled horse figurine, crudely-modelled and head missing.

TLB-48, IA, Layer (7), Period V.

Pl. XXVII-A, No. 4: Head of an animal figurine, legs missing with large head and eyes indicated by holes.

TLB-37, IA, Top Soil, Period VA.

Pl. XXVII-A, No. 5: Head of an animal probably used as a handle of some vessel, with eyes indicated by raised circles with a hole in the middle.

TLB-197, Surface.

Pl. XXVII-A, No. 6: Fragment of an animal figure, one leg missing and incised dots on the head.

TLB-309, IA, Layer (35A), Period IIA.

Pl. XXVII-A, No. 7: A broken head of an elephant figurine forehead decorated with incised lines.

TLB-38, IB, Layer (1), Period VA.

DECORATED OBJECTS

Ornamental plaques in fragments and miniature architectural features were also found, which mostly came from the surface or upper levels of Trench TLB-I.

Pl. XXVI-B, No. 3: A terracotta capital, decorated with deeply-cut leaf design.

Pl. 93, Surface.

Pl. XXV, No. 4: Fragment of brick decorated with a recessed square design.

TLB-60, IA, Pit, Period VA (?)

Pl. XXVI-B, No. 5: A fragment of a capital decorated with a leaf design.

TLB-99, Surface.

SLING BALLS

Numerous sling balls of varying sizes were recovered in the excavated trenches but the largest number of sling balls of medium size came from layer (35), Trench IB and the top level of layer (17) in Trench III (moat). The following are selected for illustration.

Pl. XXVII-B, No. 1: A sling ball of pale-red colour, under-fired.

TLB, IB, Layer (35), Period III.

2: A sling ball of terracotta, under-fired.

TLB, IB, Layer (35), Period III.

Over 500 similar specimens were recorded.

3: A sling ball of terracotta with an uneven exterior surface.

TLB, III, Layer (17), Period IIB.

4: A sling ball with a rough exterior surface and two ends pressed inside.

TLB, IB, Layer (28), Period III.

5: A large sling ball with an uneven exterior surface, well-fired, broken on one side.

TLB-106, Layer (16), Period V.

BEADS, COUNTERS AND BALLS

Trenches TLB-I and III revealed a large number of beads of different shapes, balls of varying sizes and some counters, amongst which the

following specimens belonging to different periods have been selected for illustration.

- Pl. XXVIII, No. 1: Short biconical bead of terracotta, unevenly-fired and with a plain exterior surface.
TLB, 1B, Layer (50), Period I.
- 2: A short biconical bead of terracotta with one end deeply-grooved.
TLB-84, I, Layer (14), Period V, (Fig. 37, No. 37).
- 3: A short conical bead of terracotta with incised parallel lines on the exterior surface.
TLB-168, IC, Layer (18), Period IV, (Fig. 37, No. 5).
- 4: A long cylindrical bead of terracotta, deeply-grooved in the middle and on the sides.
TLB, Surface, (Fig. 37, No. 17).
- 5: A conical disc bead of terracotta, of pale-red colour.
TLB-341, 1B, Layer (44), Period II, (Fig. 37, No. 13).
- 6: A damaged short cylindrical unbaked clay bead, painted on the external surface with bright-red colour.
TLB-119, I, Layer (12), Period V, (Fig. 37, No. 2).
- 7: A standard conical bead of terracotta.
TLB-128, 1A, Layer (21), Period IV, (Fig. 37, No. 14).
- 8: A short cylindrical bead of terracotta with both ends grooved.
TLB-179, IC, Layer (21), Period IV, (Fig. 37, No. 22).
- 9: A disc bead of terracotta with one side convex and black polish on the external surface.
TLB-345, 1A, Layer (47), Period II, (Fig. 37, No. 7.)

- 10: A standard conical bead of terracotta grooved at one end.
TLB-267, IA, Layer (35), Period III, (Fig. 37, No. 23).
- 11: A conical counter of terracotta with flat base and external surface decorated with incised vertical lines making a series of flutes and incised dots in the middle.
TLB-225, IB, Layer (27), Period III.
- 12: An undecorated conical counter of terracotta.
TLB-232, IC, Layer (27), Period III.
- 13: A short conical bead of terracotta unevenly-fired and having grooves at one end.
TLB-260, IB, Layer (35), Period III, (Fig. 37, No. 10).
- 14: A short conical bead of terracotta of pale-red colour, decorated at the base with small circles in between two incised lines.
TLB-226, IC, Layer (28), Period III, (Fig. 37, No. 21).
- 15: A short conical bead of terracotta with bright-red slip on the surface and having two grooves at the base.
TLB-184, IB, Layer (23), Period III, (Fig. 37, No. 18).
- 16: A long cylindrical hand-made bead of terracotta with an uneven external surface.
TLB-190, IB, Layer (24), Period III, (Fig. 37, No. 6).
- 17: A ball of terracotta decorated with a circular design incised all over the surface.
TLB-49, I, Layer (7), Period V, (Fig. 37, No. 4).
- 18: A terracotta ball with deep holes in the middle of an incised surface.
TLB-294, III, Layer (8), Period IV, (Fig. 37, No. 15).

- 19: A terracotta ball decorated with concentric circular design.
TLB-14, I, Layer (3), Period VA, (Fig. 37, No. 6).
- 20: A tiny ball of terracotta.
TLB-109, IB, Layer (18), Period IV.
- 21: A terracotta ball with incised surface.
TLB-108, I, Layer (16), Period V.

Beads of semi-precious stone and shell are described separately, (below, pages 144 and 148—150).

GLASS OBJECTS

The glass objects recovered were very few in number, consisting of fragments of bangles and small pieces of glass vessels. All the specimens of glass came from the levels belonging to Periods IIB to VA in TLB-I. The fragments of glass belonging to Periods IV and V are of light blue colour and have transparent body which shows numerous bubbles. Among the pieces one thick piece of light-greenish colour, translucent but having bubbles in the body, was also found from layer (8), belonging to Period V.

Three specimens of glass bangles are selected for illustration:—

- Pl. XXVIII, No. 22: A fragment of glass bangle of black colour and Plano-convex in section.
TLB-131, IA, Layer (2), Period IV, (Fig. 38, No. 11).
- 23: A fragment of glass bangle, black-coloured, opaque-bodied and an uneven triangular surface.
TLB-17, I, Layer (4), Period VA.
- 24: Fragment of a glass bangle, light-greenish in colour, translucent body, triangular in section and having a thin incised line on the external surface.
TLB-23, I, Layer (6), Period VA.
- Pl. XXIX, No. 3: Fragment of a glass bangle, yellow coloured with applied dots on the outer surface.
TLB-279, IB, Layer (36), Period IIB, (Fig. 38, No. 12).

EXCAVATIONS AT TULAMBA

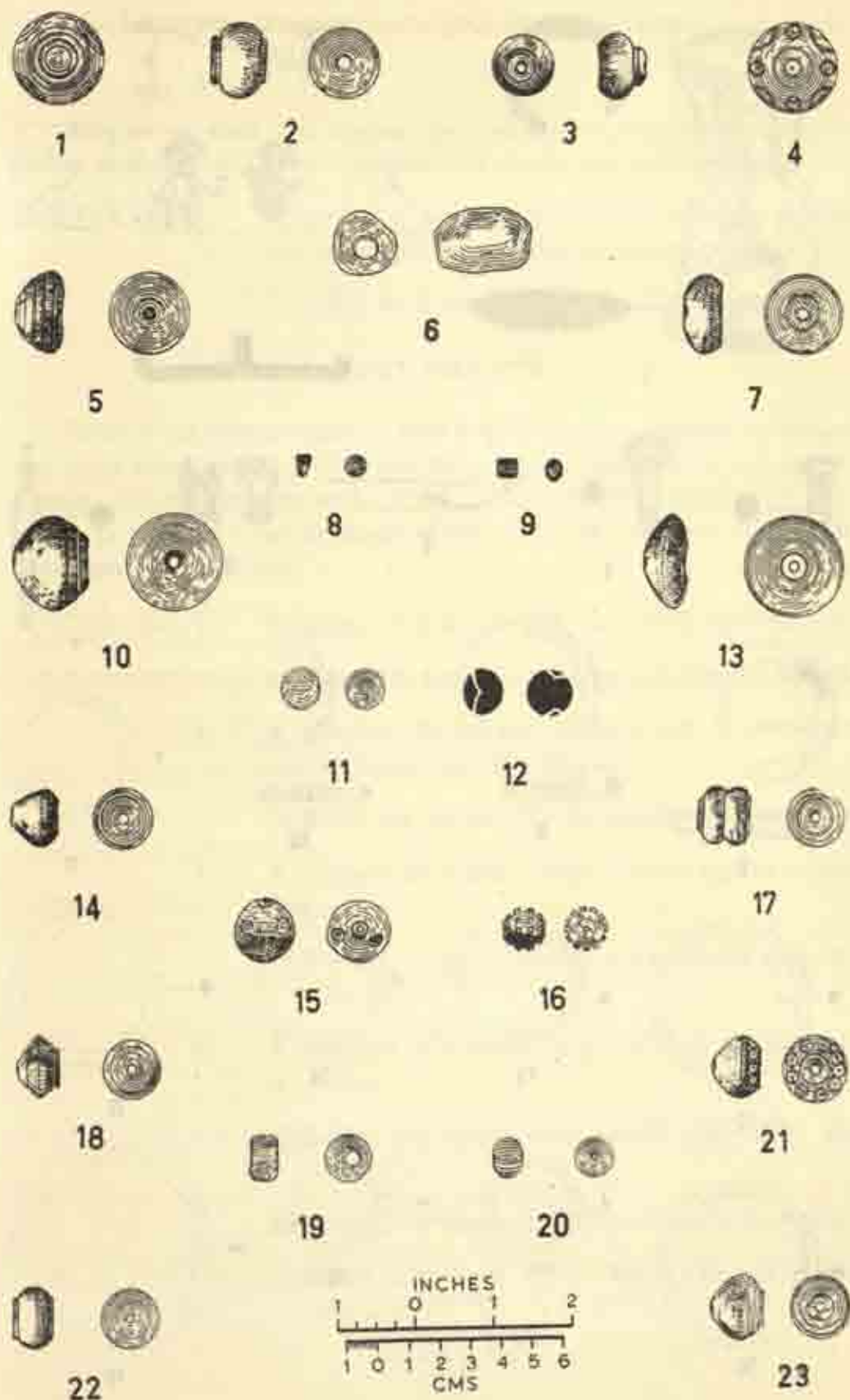


FIG. 37. Miscellaneous beads from different levels.

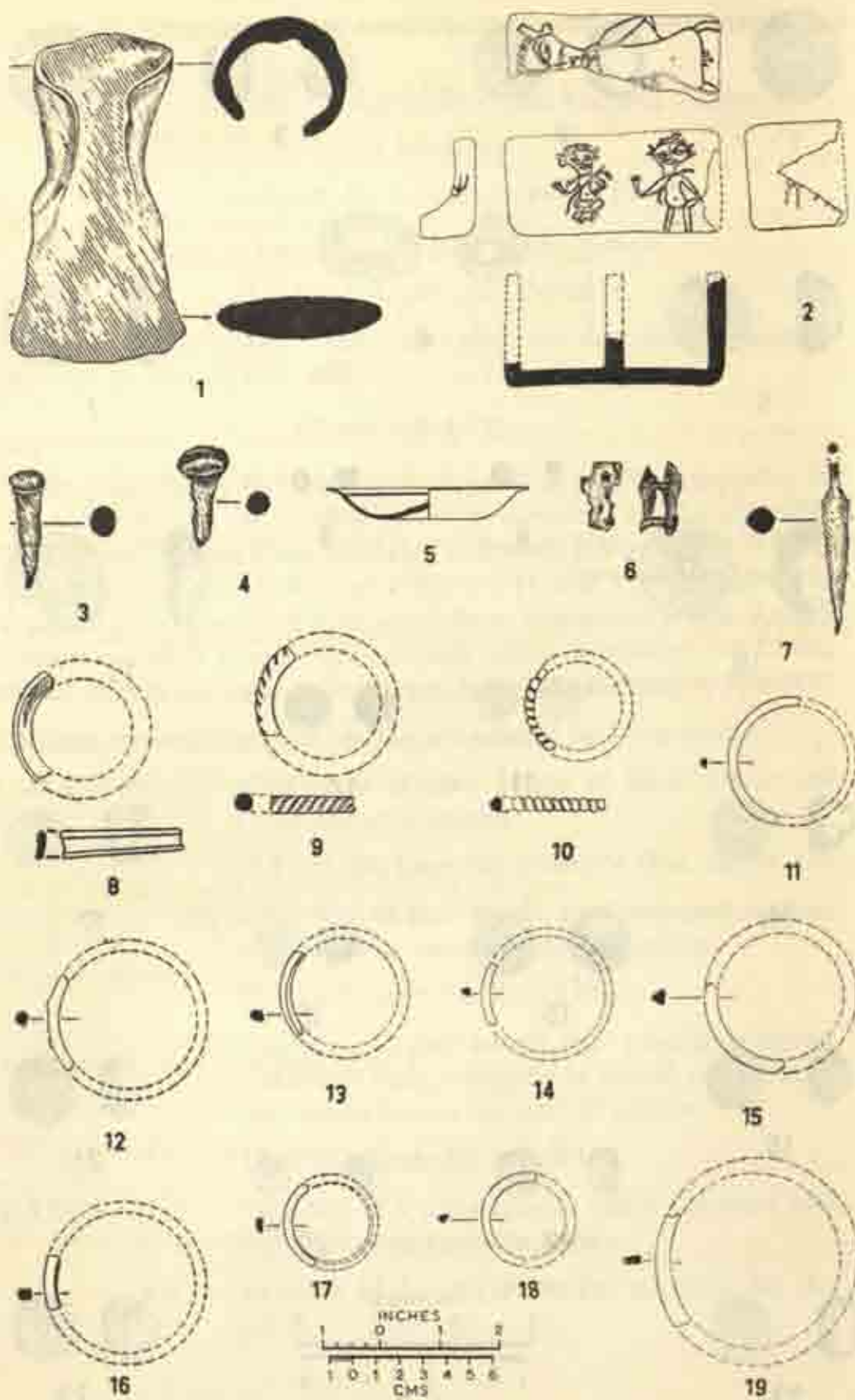


FIG. 38. Shell, terracotta and metal objects.

- Fig. 38, No. 18: Fragment of a glass bangle, triangular in section.
TLB-17, I, Layer (4), Period VA.

Bangles of shell and copper are described under separate heads (below and page 145). Here a specimen of faience may also be added.

- Pl. XXIX, No. 2: Fragment of a bangle of faience, round in section and showing a twisted rope design on the edge.
TLB-244, IC, Layer (33), Period III, (Fig. 38, No. 9).

SHELL OBJECTS

Most of the objects made of shell from Tulamba consisted of bangles and fresh water molluse, either complete or with perforation, for use as charms. Many complete and rubbed cowries and a few beads were also recovered from all the levels except of period I. The following representative types are illustrated.

- Pl. XXIX, No. 1: Fragment of a bangle with channelled outer surface.
TLB-261, IB, Layer (35), Period III, (Fig. 38, No. 8).
- 4: A complete fresh-water molluse with a perforated end, probably used as a charm.
TLB-114, 1A, Layer (18), Period IV.
- 5: A fragment of a shell bangle, almost square in section.
TLB-350, III, top of Layer (17), Period IIB, (Fig. 38, No. 13).
- 6: A fragment of a small bangle of shell, rectangular in section.
TLB-357, III, Layer (20), Period IIB, (Fig. 38, No. 17).
- 7: Fragment of a bangle of shell, rectangular in section.
TLB-279, IB, Layer (36), Period IIB, (Fig. 38, No. 19).

- 8: A fragment of a thin bangle of shell biconvex in section.

TLB-312, IA, Layer (40), Period IIA, (Fig. 38, No. 14).

- 9: A small fragment of shell bangle, almost square in section.

TLB-312, IA, Layer (40), Period IIA, (Fig. 38, No. 16).

- Fig. 38, No. 15: A fragment of a shell bangle, triangular in section.

TLB-231, I, Layer (6), Period VA.

SHELL BEADS

Only three shell beads were found which are described below:—

- Pl. XXIX, No. 10: A short cylindrical shell bead.

TLB-235, IA, Layer (15), Period III.

- 11: A standard spherical bead of shell, partly damaged.

TLB-374, III, Layer (25), Period IIA, (Fig. 37, No. 11).

- Fig. 37, No. 8: A tiny shell bead, short, cylindrical and partly damaged.

TLB-287, IB, Layer (38), Period IIB.

Eleven cowries were found among which nine were rubbed on both sides. Two are illustrated below.

- Pl. XXIX, No. 12: Came from Trench IB, Layer (23) and belongs to period III.

TLB-201.

- 13: Was recorded from layer (24) of the same trench as number 12 above and also belongs to Period III.

METAL OBJECTS

Metal objects from Tulamba consist of a tiny piece of gold, a pendant of silver, copper and bronze articles, a folded sheet of lead and many objects of iron for various uses.

A tiny piece of gold, probably a fragment of an amulet, found from the surface, was the only specimen of the precious metal. It is not illustrated. The selected objects, of other metals, are described as under.

Pl. XXXII, No. 18: A circular pendant of silver bearing the figure of a three-faced Shiva with a perforated upper end. The lower end is triangular and is decorated with a beaded design on the surface. The outer edge of the pendant is painted in red colour.

TLB-32, II, Layer (5), Period III.

[A coin of silver is described separately (below page 152).]

BRONZE AND COPPER OBJECTS

As compared with the number of iron objects, those of bronze and copper are few in number.

Pl. XXVIII, No. 25: A fragment of a copper bangle triangular in section, having a segmented exterior.

TLB-324, 1A, Layer (33), Period III, (Fig. 38, No. 10).

Pl. XXX, No. 11: A complete shallow copper dish with a flaring featureless rim and a concave bottom.

TLB-388, IB, Layer (48), Period II, (Fig. 38, No. 5).

Pl. XXX, No. 14: A decorated piece of bronze with incised surface.

TLB-112, I, Layer (15), Period V.

No. 16: A socket of bronze with one end dented.

TLB-8, I, Layer (16), Period V.

No. 18: A ring of bronze, biconvex in section.

TLB-47, I, Layer (7), Period V.

A fragment of a copper vessel showing a very thin profile from layer (39) of Trench I belonging to period IIA and a folded sheet of lead, recovered from I, layer (29) of period III, are not illustrated.

IRON OBJECTS

- Pl. XXX, No. 1: A small iron nail with circular head and convex top.
TLB-216, IA, Layer (26), Period III, (Fig. 38, No. 4).
- 2: An iron nail, circular in section and flat head.
TLB-218, IB, Layer (23), Period III, (Fig. 38, No. 3).
- 3: An iron spear-head, circular in section. The point and tang are broken.
TLB-152, IA, Layer (25), Period III.
- 4: An iron spear-head, square in section with pointed end but the tang is broken.
TLB-236, IB, Layer (27), Period III, (Fig. 38, No. 7).
- 5: An iron rod, tapering to a point and circular in section.
TLB-221, IB, Layer (27), Period III.
- 6: A fragment of an iron hook, rectangular in section and both ends pointed.
TLB-141, IA, Layer (22), Period IV.
- 7: A fragment of an iron nail, rectangular in section and flattened in the middle and at the end which is rounded.
TLB-133, IA, Layer (20), Period IV.
- 8: Similar as No. 7 above, but rusted and with less pronounced flattened sides.
TLB-204, IA, Layer (21), Period IV.
- 9: A fragment of an iron knife blade, the end of which is convex.
TLB-228, IC, Layer (21), Period III.
- 10: A fragment of an iron rod, round in section.
TLB-282, IB, Layer (35), Period III.

- 12: A small iron clamp with two rivets.
TLB-62, I, Layer (10), Period V, (Fig. 38, No. 6).
- 13: An iron door (?) fitting, loop-shaped with end flattened into leaf design. A rivet is fixed at the upper end of the object.
TLB-161, IB, Layer (21), Period IV.
- 15: An iron socket, conical-shaped.
TLB-191, IB, Layer (23), Period III.
- 17: An iron ring circular in section but flattened on one side.
TLB-4, I, Layer (2), Period VA.
- 19: An iron *khurpa* with one end flattened and the other turned inside to receive the circular wooden end. Wood marks are still visible on the rusted surface.
TLB-155, IC, Layer (18), Period IVA, (Fig. 38, No. 1).

STONE OBJECTS

The stone objects recovered from Tulamba consisted of pestles, pieces of grinding mills, grinding stones, whetstones and circular stone pebbles which might have served as weight. A number of semi-precious stone beads were also found which are described separately.

Among the stone household objects, the following are selected for illustration.

- Pl. XXXI, No. 1: A stone pestle, cylindrical in shape with rounded ends.
TLB-31, I, Layer (7), Period V.
- 2: A small pestle of black stone, similar in shape as No. 1 above.
TLB-186, IB, Layer (22), Period IV.

- 3: A stone pestle square in section, both ends convex and two sides are smoothed due to use.
TLB-187, IB, Layer (22), Period IV.
 - 4: A stone pestle of black stone with a very smooth surface, almost square in section.
TLB-163, IB, Layer (22), Period IV.
 - 5: An almost circular disc of stone, probably a weight.
TLB-85, I, Layer (13), Period V.
 - 6: A circular stone disc, probably a weight.
TLB-293, III, Layer (8), Period V.
 - 7: A fragment of a circular grinding stone with a semi-circular foot. It has incised line on the top and on the foot.
TLB-356, IA, Layer (27), Period III.
 - 8: A fragment of whetstone having deep grooves on both the sides.
TLB-202, IB, Layer (20), Period IV.
 - 9: A fragment of a stone pestle, almost rectangular in section and wide smooth sides.
TLB-134, IA, Layer (21), Period III.
- Pl. XXIX, No. 14: A fragment of soap-stone, triangular in section.
TLB-171, Surface (Trench IV, Defence Wall).

SEMI PRECIOUS STONE BEADS

The following description includes the total number of 32 necklace beads and those found from other trenches.

- Fig. 37, No. 9: A short cylindrical bead of purple glass.
TLB-29, I, Layer (7), Period V.

Fig. 37, No. 16: A short spherical stone bead with a knobbed exterior.
TLB-310, 1A, Layer (41), Period IIA.

Pl. XXVIII, No. 6: A short spherical bead of blue stone.
TLB-304, 1A, Layer (39), Period IIA, (Fig. 37, No. 29).

Pl. XXVIII, No. 27: A short spherical bead of banded agate.
TLB-238, 1A, Layer (29), Period III, (Fig. 37, No. 12).

BEADS OF NECKLACE (Pl. XXXII)

Starting from the upper left side of the necklace and counting the beads downwards, the following description of the beads of necklace, which was recovered from Trench II, Layer (5), period III, is given.

- 1: A broken bead of glass, disc shaped.
- 2 & 3: Short cylindrical beads, with convex sides, seem to be of ordinary stone.
- 4 to 12: Spherical beads of cornelian.
- 13: A short spherical bead of banded agate.
- 14: A long cylindrical bead of jasper with convex sides.
- 15: Similar in shape as above but made of ordinary stone.
- 16: A short cylindrical bead of cornelian with an etched exterior making vertical flutes.
- 17 & 19: Cornelian beads, spherical, (No. 18 is the silver pendant).
- 20: A square bead of blue coloured stone with cut edges.
- 21: An irregular-shaped long bead of glass.
- 22: A long cylindrical bead of green stone.
- 23: A long cylindrical bead of jasper, convex sided.
- 24: A damaged bead of cornelian.
- 25: A bead of jasper, convex-sided.
- 26 to 30: Spherical beads of cornelian.
- 31: A short spherical bead of banded agate.

32: Similar but smaller.

33: Long cylindrical bead of stone (?)

(Because of the number given to the silver pendant of the necklace as No. 18, the total number of objects listed comes to 33.)

COINS

The main Trench TLB-I yielded 6 copper coins and one of silver from various stratified levels, amongst which one belonged to Apollodotus, one to 'Sotar Megas', two were attributed to Shahabuddin Mohammad Ghorī and the rest were badly corroded and could not be decyphered.

At a site where the whole material was new to knowledge and there was almost nothing or little to compare with other sites, the discovery of coins, though few in number, was helpful in working out broad brackets of chronology and in placing the bulk of finds into some kind of tentative time-scale. The following description includes the coins found in the excavations and those picked up from the surface of various mounds in the vicinity.

1. COPPER COINS OF APOLLODOTUS

From layer (51) of TLB-I came a square coin of Apollodotus with partially distinct legends both on the obverse and reverse due to damaged surface (Pl. XXXIII, No. 1). The obverse shows Apollo facing right and holding an arrow with both hands. There is an indication of a monogram in the left field but this cannot be recognized accurately due to damage. The legend runs on three sides, of which the following Greek letters can be decyphered.

Left line Α Ξ Ξ

Upper line Ξ Α Τ Η Ρ Ο Ξ

Right line Α Μ Ο Α

The reverse shows tripod lobes within a Kharoshti legend mostly corroded, particularly the top and right side which usually bear the name of the ruler, cf. Coin No. 344 of P.M. Cat.

Among the two Apollodoti of the house of Euthydemus, the coins of Apollodotus I (Circa. 175 B.C.), near contemporary of Menander of Eastern Panjab and Agathocles,⁴⁶ are widely distributed in Afghanistan,

⁴⁶ Dr. Ahmed Hasan Dani, "Shaikhani Dheri Excavation, 1963 & 1964," in *Ancient Pakistan*, Vol. II, P. 38.

Punjab and the Indus Valley. About 162 B.C., the north-west frontier kingdom was lost to Eucratides and the rule of the successors of Apollodotus I, *viz.*, Apollodotus II, Dionysius, Sollus and Apollophanes was confined to the regions east of the Jhelum.⁴⁷ The kingdom in East Panjab was finally conquered and absorbed into the Saka empire during the reign of Azes I (c. 58 B.C.).

The coin from level (51), therefore, seems to be of Apollodotus II of mid-second century B.C. The presence of Indo-Greek kings in this part of Panjab is further confirmed by the discovery from the surface of two circular copper coins of Apollodotus II at Jarahi Ratti Theri Bhir and at Shorkot.⁴⁸

A circular copper coin of Apollodotus (Pl. XXXIII, No. 2) was found on the surface of Ratti Theri Bhir, *cf.* L.M.C., No. 322, Pl. V; L.M.C., Vol. I, Pl. IV, No. 6; and Dani—Shaikhan Dheri, Pl. LI, No. 6.

2. COPPER COIN OF SOTAR MEGAS

One copper coin of 'Sotar Megas' with the bust of a king on obverse and a horse with rider on reverse was found from layer (45) of TLB-I. The legend on the coin had disappeared but the figures on both the sides helped to identify it with that of the so-called nameless king, calling himself *Sotar Megas*, *i.e.*, the great saviour. The three-pronged distinguishing mark on our find is missing, *cf.* P.C.C., Pl. XVI, No. 100.

These coins in circular shape were struck in copper only and are found in extraordinary abundance from Peshawar to Jumna Valley. (Whitehead, p. 160). This nameless king seems to be linked with Vima Kadphises who first used the title of Sotar Megas.⁴⁹ He may have been appointed viceroy during the time of Vima Kadphises or administered territories after his death till the accession of Kanishka. The stratigraphic evidence at Shaikhan Dheri indicated that the coins of Sotar Megas were earlier than the early Kushan period,⁵⁰ and thus may be placed before the accession of Kanishka. If Kanishka's accession is accepted as A.D. 120, the period of Sotar Megas may, therefore, be assigned approximately to A.D. 110-120 or slightly earlier.

47 *Cambridge History of India*, 1955, Vol. I, p. 642.

48 *A.S.I.R.*, Vol. V, p. 99 and Cunningham, *Ancient Geography of India*, 1871, Vol. I, p. 207.

49 Sir John Marshall, *Taxila*, 1951, Vol. II, p. 786. 96 similar coins of Sotar Megas were found at Taxila.

50 *Op. cit.*, p. 38.

3. COINS OF MUHAMMAD GHORI

Two coins of so-called "bull and horseman" type, one of silver from layer (23) (Pl. XXXIII, No. 5) and a copper coin from layer (18) were recovered from TLB-I. The silver coin is badly damaged on the reverse which is also chipped at one edge. Because of the small size and its fragility, a few letters could be revealed from the rust with much care and as such their reading cannot be claimed as final and perfect in the present state, though its identification with Muhammad Ghorī seems certain.

However, the coin with the representation of bull, is a copy of Indian prototypes made during the early days of Mu'izz-ud-din Muhammad bin Sam or Shahabuddin as called in his youth, otherwise known as Muhammad Ghorī.

4. COPPER COIN OF ALA-UD-DIN MUHAMMAD SHAH

A circular coin was found on the surface of the central mound close to the main Trench TLB-I (Pl. XXXIII, No. 4). Since Tulamba was in existence at the time of Timur's invasion in A.D. 1398, this coin of Ala-ud-Din (A.D. 1295—1315) must, therefore, belong to this site. It reads:

Obv.	Rev.
السلطان الاعظم	علا الد نيا والدين

Cf. Lane-poole, The coins of the Sultans of Delhi in the British Museum, p. 43, Nos. 202 and 203.

5. COINS OF AURANGZEB ALAMGIR

A circular copper coin was picked up from the surface of Sungerwala Tibba. It was struck at Multan and dated 1107 A.H./A.D. 1695 (Pl. XXXIII, No. 3).

Obv.	Rev.
عالم کبر شاہ	ملتان ضرب
۱۱۰۷ نگ	جلوس مبارک
فلوس	سنة ۱۱۰۷

Cf. L.M.C., Vol. II, No. 1988, p. 269.

A FRESH STUDY OF THE FIRE-TEMPLE (?) AT TAXILA

by

Dr. Nazimuddin Ahmad

One of the most striking buildings at Taxila is the so-called Zoroastrian temple, situated about 700 yards north of the north gateway of Sirkap. The mound which covered the ruins of this monument stood about 45 feet high on a 250 feet square base at the time of General Cunningham's visit to that place in 1863-64, and was locally known as Jhandiala-kadheri.¹ He describes it as "the loftiest mass of ruin now existing near Shah-dheri". He sank two trenches at right angles across the mound, which, at a depth of 7 and 8 feet, brought to light three massive walls of a large building; although he continued digging down to a depth of 12 feet below the surface of the mound, he failed to appreciate the planning of the structure. The walls he described were of different thicknesses, varying from 10 feet 7 inches to 5 feet 2 inches. His excavation yielded only a large copper coin of one of the Azes, which he fails to identify, amidst a quantity of ashes. He, however, predicted that the mound covered the ruins of an ancient temple of large dimensions. Subsequently, when Marshall began his excavation, the overlying walls of medieval date had to be completely removed. This revealed an imposing building about 16 to 17 feet beneath the surface, which measures 158 feet long, including the projecting part in front of its portico, and 85 feet wide. Its plan, as observed by Marshall² "is unlike that of any temple known to us in India, but its resemblance to the classical temples of Greece is striking". In Greece the ordinary peripteral temple is surrounded on all sides by a peristyle of columns and contains a 'pronaos' or front porch, a 'naos' or sanctuary, and at the rear, an 'opisthodomos' or back 'porch', known to the Romans as the 'posticum' ... In the temple at Jandial the plan is almost identically the same. In place of the usual peristyle of columns is a wall, pierced at frequent intervals by large windows, which admitted ample light to the interior, but at the front entrance to the temple are two Ionic columns 'in antis', i.e., between pilasters which supported the

¹ Sir A. Cunningham, *A.S.I.*, Vol. 2, p. 131.

² Sir John Marshall, *Taxila* (Camb. 1951) Vol. 1, p. 223.

ends of the architraves passing above them. Corresponding to them on the inner side of a spacious vestibule is another pair of similar columns 'in antis'. Then comes just as in Greek temples, the 'pronaos' leading through a wide door-way to the 'naos', while at the back of the temple is another chamber, corresponding to the 'opisthodomos'. The only essential difference in plan between this and a Greek temple is that, instead of an extra chamber between the 'opisthodomos' and 'naos', we have at Jandial a solid mass of masonry, the foundations of which are carried down over 20 feet below the temple floor. The unusual depth of the foundation indicates that this mass of masonry was intended to carry a heavy superstructure, which Marshall infers to have been a tower, about 40 feet high. The existence of two broad flights of steps at the back of the building was presumed to be the remnants of the original staircase which provided access to the tower. The entire walls of the building are built of coursed-rubble masonry, comparable to the fortification wall of Sirkap. As usual with other monuments at Taxila, the masonry is largely of local limestone, but the mouldings at the base of walls and the cornices are of spongy 'Kanjur'. The mouldings run completely round the outside of both the inner and the outer walls and round the interior of the 'naos'. They are of 'cyma recta' pattern. Originally the whole surface of the walls, both inside and outside, was undoubtedly covered with a thick coating of stucco, patches of which can still be found at various places. The entrance of the two inter-communicating chambers, Marshall's 'naos' and 'pronaos' appears to have been of wood bound with iron, fragments of which were found in the charred debris strewn over the floor.

No actual remains of the superstructure were found, but from the charred wood, hinges, nails and other bits of iron, together with a thick layer of half-burnt clay which littered the floor, he surmised that the architrave, frieze, and cornice must have been of wood and were, no doubt, of the Ionic order, in keeping with the Ionic style of the columns, pilasters and mouldings. The roof, too, was largely of wood and flat, not of the gable type usual in Greek temples.¹

The total absence of images, reliefs, or any kind of sculpture among the ruins, led Marshall to rule out the hypothesis of its ever being a Buddhist, Jaina or Brahmanical shrine. On the other hand, existence of an unusually massive foundation behind the so-called 'naos' which he inter-

¹ *Ibid.* P. 224.

puted as the foundation of a tower on the nature of a 'Zikurrat' tapering like a pyramid and ascended in the same way as the Zikurrats of Mesopotamia,¹ led to his identifying it as a Zoroastrian Fire-Temple. The blazing fire on the altar, he thinks stood on the summit of the supposed 'tower', and the altar itself was probably constructed of large bricks laid in mud mortar.²

As to the date of this interesting building, Marshall, after a great deal of vacillation throughout the series of his publications, in which he attributes it successively to Azes I and Vonones, the Parthian monarchs,³ finally decided in his post-script in favour of the Bactrian-Greek period. He says, "... further consideration of this vexed problem forces me to the conclusion that the temple is approximately of the same age as the walls of Sirkap, and that it appertains, therefore, to the Greek period."⁴

In arriving at his final conclusion as to a 2nd century B.C. date of this building, which, as we shall see presently is hardly justifiable, the following considerations obviously played a great part in his mind: firstly, "the striking Greek character of its plan and the design of its Ionic pillars", together with its 'peristyle' of columns and the existence of classical Greek elements such as the 'pronaos', 'naos' and 'opisthodomos', as well as the mouldings on the walls showing the ordinary Greek 'cyma recta' pattern, etc., and secondly, the descriptions of a temple at Taxila by Philostratus, in his *Life of Appollonius*. The relevant passage quoted by Marshall⁵ runs as follows: "They saw a temple in front of the wall, about 100 feet in length and built of shell-like stone. And in it was a shrine which, considering that the temple was so large and provided with a peristyle disproportionately small, but, nevertheless, worthy of admiration; for nailed to each of its walls were bronze panels on which were portrayed the deeds of Porus and Alexander; the elephants, horses, soldiers, helmets and shields are depicted in brass, silver, gold and copper, the lances, javelins and swords all in iron." Interpreting 'in front of the wall' of the above passage, as the northern wall of Sirkap with its main entrance, Marshall identifies this Jandial monument with the temple described by Philostratus.

¹ Ibid. p. 226.

² This account of Marshall is probably influenced by Spooner's article on fire-altar. (Spooner, D.B., *The Zoroastrian Period in Indian History*) in *J.R.A.S.*, Jan. and July, 1915, pp. 63-89 and 405-455. These are, however, later in date. Fire altars are also to be found on the Sanchi relief, but these are Brahmanical.

Marshall and Foucher, *The Monuments of Sanchi*, Vol. II, Pl. 52. Panel showing the relief on South pillar of Eastern Gateway, North face.

³ Marshall, *Taxila*, Vol. I, p. 226.

⁴ Ibid., p. 229.

⁵ Ibid., p. 227.

The existing remains of the building leave one in no doubt that the structure was once of imposing dimensions. Now, even if we admit its resemblance to the plan of classical Greek temples, in spite of the fact that except for the two Ionic columns and the 'Cyma recta', no other element in the construction is conclusive, there are obvious difficulties in assigning this building to a date earlier than the first century B.C., for the following reasons: Firstly, the situation of the building, facing the main entrance of the city and its imposing dimension, clearly indicates that it must have been a monument of national importance. We do not know a single Indo-Greek king who professed the Zoroastrian faith or patronized it. Secondly, the coin finds from the site are absolutely clear. No coin, either recovered by Marshall or Cunningham¹ from this site, goes back further than Azes I, that is to say, the middle of the first century B.C. In this connection it is worth remembering the fact that the quantity of antiquities unearthed at the site was singularly poor, and that they are recorded by Marshall in terms of 'levels' and 'depths' with a total disregard to the actual stratification. It is needless to point out how unsatisfactory this is. At any rate the absence of Indo-Greek coins disproves Marshall's hypothesis. Of the total number of coins unearthed from this site by Marshall, 4 are of Local Taxila types (Chaitya and taurine), 2 of Azes I, 1 of Kadphises I, 5 of Kanishka, 1 of Huvishka, 2 of Vasudeva and 1 of Vakkadeva, making a total of 16. The local Taxila coins do not help in fixing the chronology, as they are undated, though they are known to have been in circulation in the first century A.D.² 432 specimens come from the top stratum of Sirkap and Marshall himself holds that they continued to be struck after the 'Saka conquest.'³

Cunningham discovered another shrine of comparable character, though somewhat smaller, in the village of Mohra Maliaran, about 1,000 yards distant from Jandial.⁴ It was adorned with precisely similar Ionic pillars. "This appears from Cunningham's description", Marshall observes, "to have been approximately contemporary with the Jandial temple."⁵ It was clearly dated by Cunningham to the time of Azes (I or II?) in the first century B.C., from the find of a dozen coins from the foundation deposit of that shrine. Significantly enough, the coin finds from both these buildings are consistent and must lead to the conclusion that both

1 Marshall, *ibid.*, p. 229 and Cunningham, *A.S.R.*, II, p. 131.

2 Marshall, *op. cit.* p. 757.

3 *Ibid.*, p. 757.

4 Cunningham, *A.S.R.*, Vol. V, (1872-3), pp. 68 and 73.

5 Marshall, *Taxila*, Vol. I, p. 225.

were built at approximately the same time, definitely not earlier than first century B.C. Marshall, drawing a comparison between the two buildings, challenges the validity of Cunningham's date, on the grounds that the deposit of 12 Azes coins in the foundation of the Mohra Maliaran Temple, was nothing more than an ordinary 'hidden-treasure' of a hundred years after the building of the shrine.¹ In another place he unjustifiably claims the priority of date of the Jandial temple over its 'prototype' at Mohra Maliaran on the ground of its being bigger. He says, "It is natural to suppose that it was the earlier of the two and served as a model in the matter of its decorative features, for the smaller and less important shrine at Mohra Maliaran, rather than *vice versa*."²

The passage from Philostratus as quoted by Marshall, is in itself unsatisfactory especially where he introduces the Alexander myth in regard to his bronze plaques. It lacks credibility from beginning to end.

It also must be pointed out that Marshall's so-called Greek peristyle does not really exist at Jandial. From Marshall's plan³ as well as his description,⁴ it is clear that the continuous outer wall of the structure was pierced at intervals by large windows, obviously intended to admit light inside the continuous passage around the inner wall. This feature which is of the nature of an ambulatory and indeed, may be likened to the traditional Buddhist 'procession path'. In any case, it is entirely un-Greek in character.

It appears likely that this building, which may or may not have been associated with a religious function, was originally constructed during the time of Azes I (C. 57 B. C.) or a little afterwards, approximately at the same time as the temple at Mohra Maliaran. It enjoyed a short life, as the poverty of finds indicate, and was destroyed during early Kushan times. All later coins, which are Kushan came from "the deep accumulation of debris covering the ruin, into which they must have found their way at some time subsequent to the destruction of temple, but before the later building (medieval) discovered by Cunningham was erected".⁵

The stone-slab with foot-print of Buddha (?) not illustrated by Marshall, which came from the site, in fact, does not really run contrary

1 Ibid. p. 225.

2 Ibid. p. 225.

3 Ibid. p. 44.

4 Ibid. pp. 222-224.

5 Ibid. p. 224.

to the evidence furnished by the coins. This familiar Buddhist feature is common in the Sanchi and Bharhut reliefs and is, therefore, consistent with a date not earlier than the first century B.C.

The Jandial temple may be compared with the Fire-Temple of Surkh Kotal,¹ which is dated by Schlumberger to the "Grand Kushan period" or 2nd century A.D. In its plan, classical features are clear. The temple at Surkh Kotal is situated on the road from Kabul to Mazar-i-Sharif in the Qunduz valley (North Afghanistan). Constructed of large-sized unburnt bricks, its outside wall is relieved with pilasters and timbering is included in the building construction. It is provided with three entrances on the east. Schlumberger found three different stages of a square cell surrounded by an ambulatory on three sides. The roof of the cell, probably of wood, was carried on four stone-columns with 'attic' mouldings at the base.² At the centre of the cell, a square platform with three steps leading up to it was also found. The second stage consisted of later additions effected in the corridor. It was partitioned into cells so that on the south and west there were separate chambers, while the north side left undisturbed. This period of use of the temple apparently ended with a conflagration, which destroyed the roof and burnt some of the original unbaked bricks, traces of which were found in the debris. The third stage represented rebuilding on top of the earlier ruins.

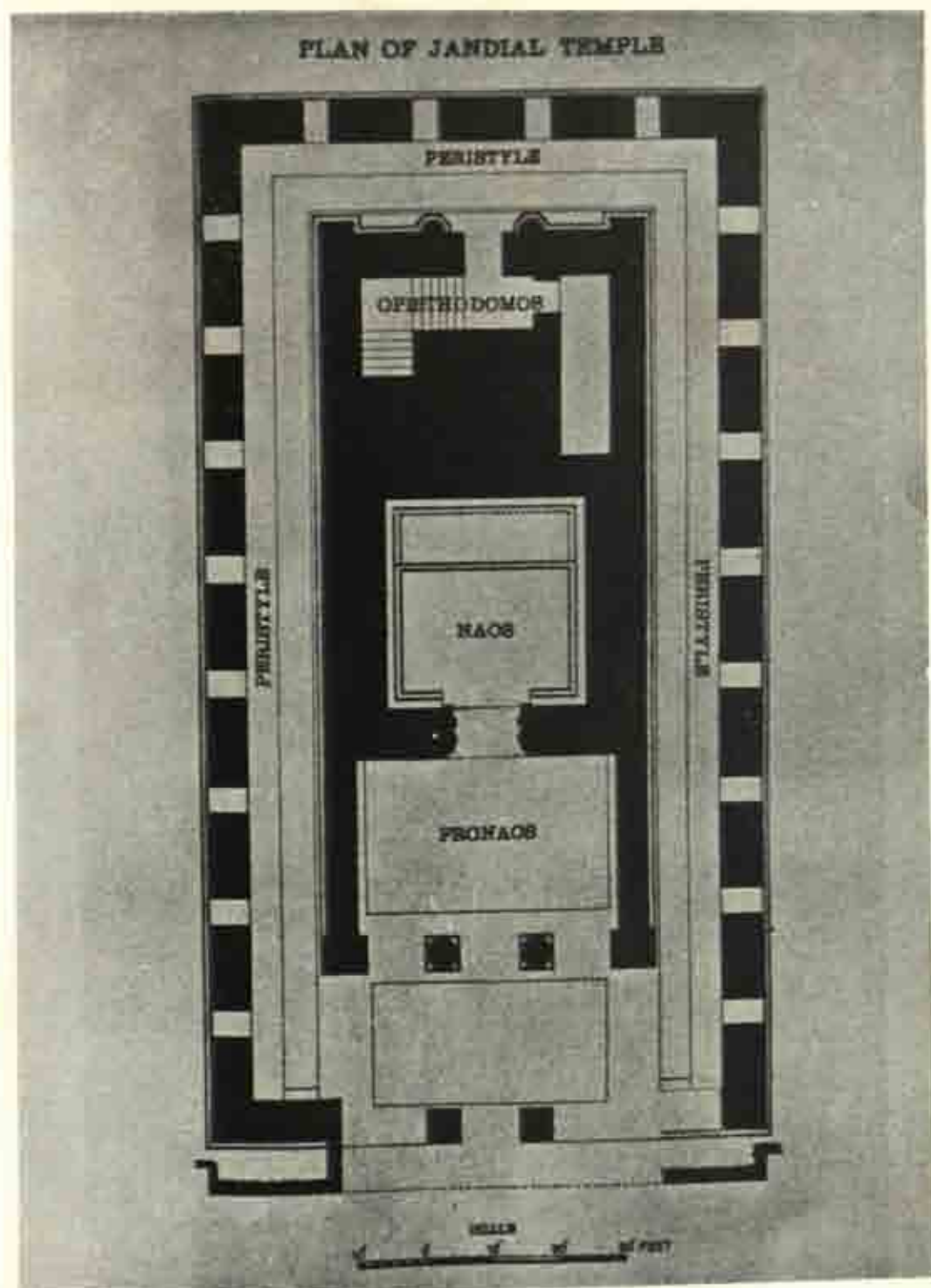
Two sculptures were recovered from the building. One of which, a badly weathered male standing figure, in local sand-stone with heavy drapery and jewellery is compared by Schlumberger with the well-known Kanishka figure. Other notable decorations in the building include a frieze with the familiar motive of a garland carried by winged figures³ (probably Eros) which commonly occurs in Gandharan reliefs. The date of the building is ascertained from the four debased coins of which three were found among the ashes, including one of Huvishka. Inscriptions recovered from the site, also, were found, to be similar to the Greek script on the 'high Kushan Coinage'. Of the other antiquities, stamped pottery of the Begram type was discovered which, according to Ghirshman only occur in the post-Kushan stratum.

In describing the plan of Surkh Kotal temple Schlumberger compared

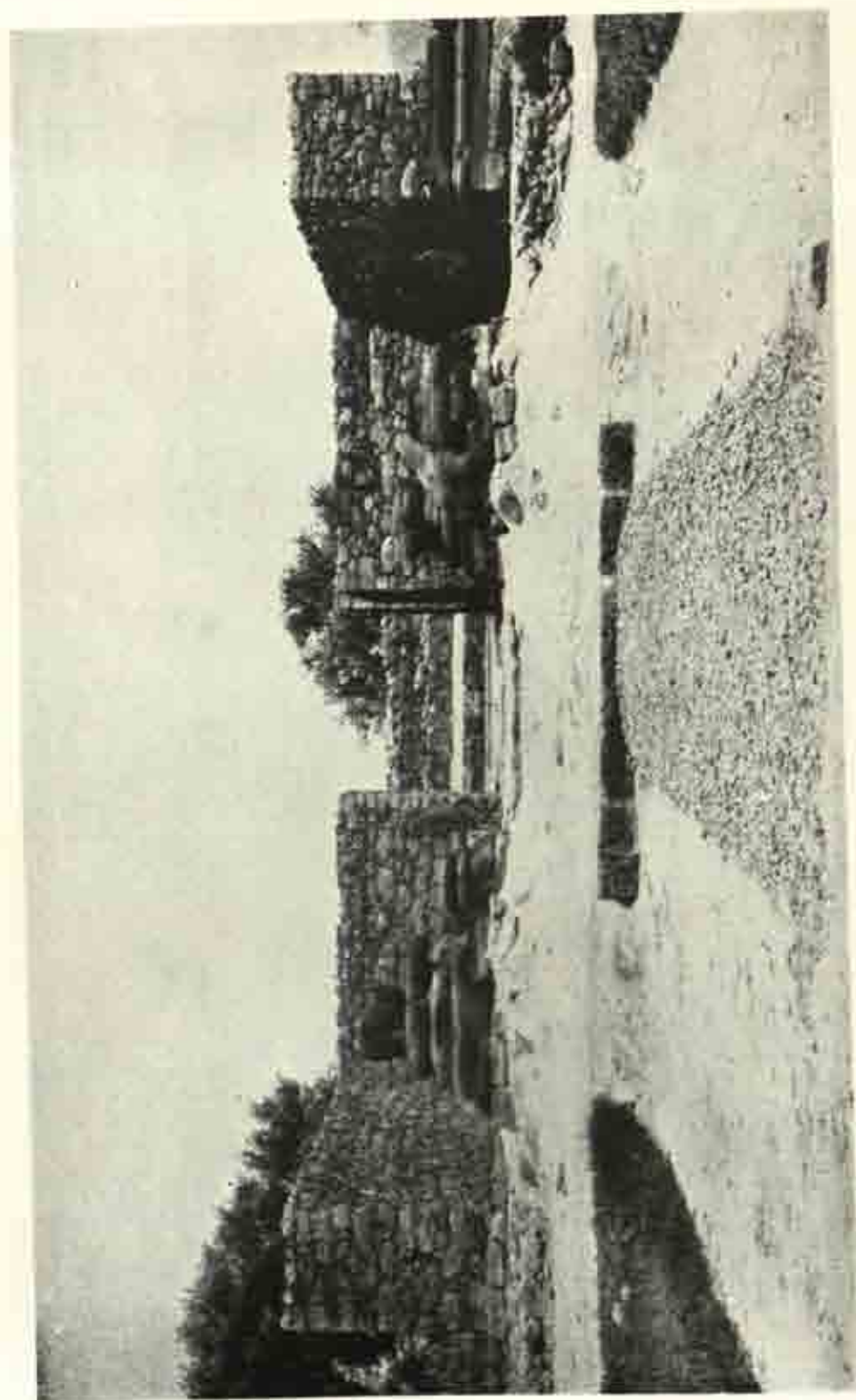
✓1 Daniel Schlumberger, "Le Temple de Surkh Kotal Bactriane" *Journal Asiatique*, 1952, pp. 433-455.

2 Ibid., Fig. 2, Pls. III and IV, pp. 439-40.

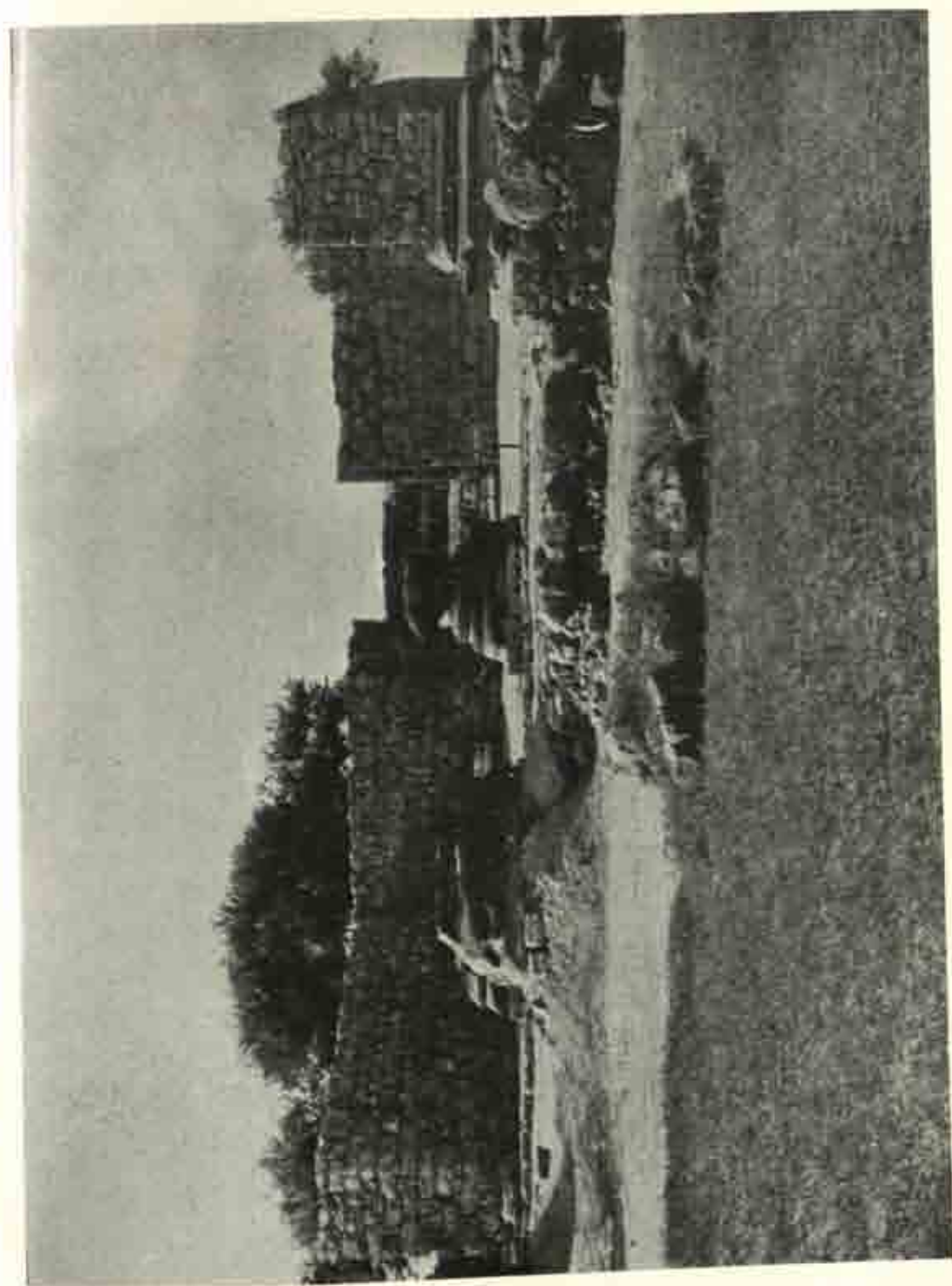
3 Ibid., Pl. VIII.



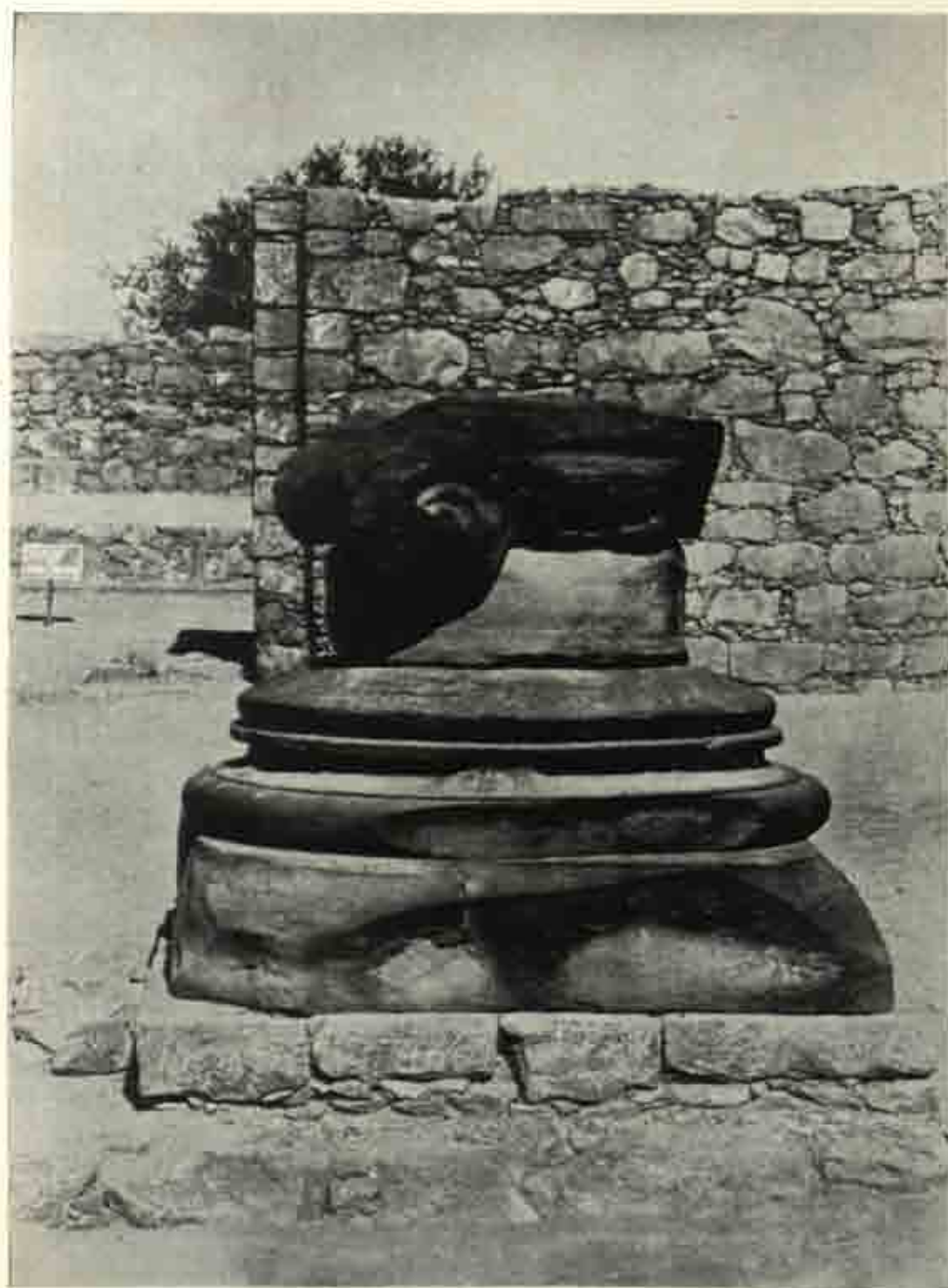
Plan of Jandial Temple at Taxila.



General view of Jandial Temple Taxila, (Frontview)



General view of Jandial Temple, Taxila



Ionic Column in Jandial Temple, Taxila.

it with the Susa temple excavated by Dieulafoy¹ and also with Herzfeld's temple at Persepolis,² which, of course, do not have the ambulatory.

It is interesting to note here, that Ghirshman³ in drawing a parallel between the Jandial temple at Taxila and the Parthian temple at Hatra observes: "To judge from the temples at Hatra and Taxila, on the eastern bank of the Indus, the plan of the Iranian sanctuary at this period (Parthian) consisted of a square central chamber, separated from the exterior by an ambulatory, and was derived from that of the Achaemenians. The staircase which in Achaemenian times had been external, was contrived in the thickness of the wall and led upto the roof, on which the altars were situated. Religious ceremonies still took place in the open, near the temple, but the sacred fire burnt on the roof". He obviously takes the Jandial monument to be a Parthian Fire-Temple, to which, of course, the supposed tower of Marshall doubtless, lends support. This hypothesis although not unlikely, presents one difficulty, *i.e.*, the total absence of any Parthian coinage. We virtually know nothing of the professed religion of the Sakas and to a lesser degree, of the Parthians. As for the Parthian religion, it appears almost certain that Zoroastrianism, if not in preponderance, was certainly professed by a large number of the population.⁴ On the other hand, it is not unlikely that the Sakas, by their long and intimate association with Iran, must have been deeply imbibed with Iranian beliefs and at the time when this 'Fire-Temple' was erected, they regarded Zoroastrianism as their state religion.

However, one thing appears to be certain, and that is, the date of its foundation does not go back to the 2nd century B.C., as Marshall concludes. In all likelihood, it was founded during the early Saka period on a unique plan, having classical features. As for the purpose of the building, it is difficult to be precise. Although the inference of its being a religious edifice is not improbable, as held by Marshall, Cunningham and Ghirshman, the complete absence of any objects, reliefs or sculpture, associated with any religion, makes it difficult to prove. As the monument stands now, it is largely the result of Marshall's reconstruction, carried out at the time of his excavation.

¹ Dieulafoy, M., *L'Aeropole de Susse*, pp. 411-414.

² Herzfeld, E., *J.R.A.S.* 1934, p 232; *Iran in the Ancient East*, p. 275, Pl. LXXXV.

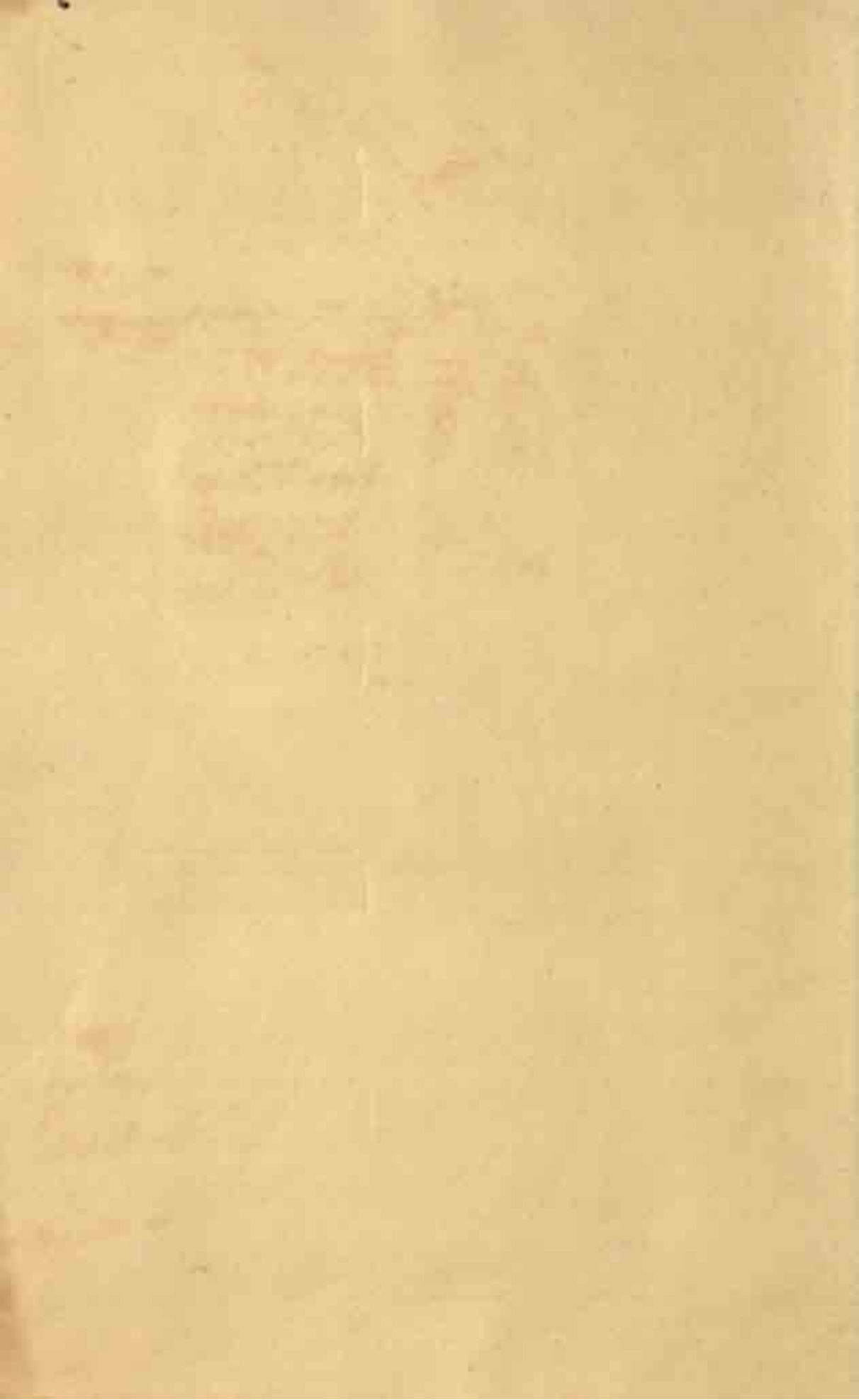
³ Ghirshman, R., *Iran, from the earliest time to the Islamic conquest*, (1954) p. 277.

⁴ Marshall, *Taxila*, Vol. I, p. 57.

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